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M E D I C A L
A N D
P H I L O S O P H I C A L
C O M M E N T A R I E S.

By a SOCIETY in EDINBURGH.

—————Quae non fecimus ipsi,
Vix ea nostra voco.—————OVID.

VOLUME FIRST.

PART I.

L O N D O N:

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M, DCC, LXXIII.



T O

WILLIAM ROBERTSON, D. D.

PRINCIPAL of the UNIVERSITY

of EDINBURGH.

S I R,

WE are sensible that, by prefixing your name to a work of this nature, we can add nothing to your reputation, which already stands upon a more firm, and more honourable basis than the panegyric of Dedication. The fame which you have justly acquired by your own writings is superior to that which can arise from patronizing those of others. But, although, in this point of view, our address be unnecessary, we hope it will not be unacceptable.

Placed at the head of a celebrated School of Medicine ; attentive to every circumstance which

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can promote its interest ; and anxious to embrace even the slightest opportunity of forwarding every scheme which has a tendency to improve any branch of science ; without solicitation on our part, you have honoured us with your opinion, upon many particulars, respecting the conduct of this undertaking. In some things we have already followed your advice with success ; and we trust that a strict observance of it in others, will hereafter be attended with the same effect. Permit us then to embrace this opportunity of publicly acknowledging these obligations, and of returning you our sincere thanks.

We are, with due respect,

And high esteem,

Your obedient Servants,

EDIN. Jan. 12. }
1773. }

The A U T H O R S.

I N T R O.

I N T R O D U C T I O N.

MEDICINE has long been cultivated with assiduity and attention, but is still capable of farther improvement. Attentive observation, and the collection of useful facts, are the means by which this end may be most readily obtained. In no age, since the revival of learning, does greater regard seem to have been paid to these particulars, than in the present. From the liberal spirit of inquiry which universally prevails, it is not surprising that scarce a day should pass without something being communicated to the public as a discovery or an improvement in medicine. It is, however, to be regretted, that the information which can by this means be acquired, is scattered through a great number of volumes, many of which are so expensive, that they can be purchased for the libraries of public societies only, or of very wealthy individuals. Hence, a complete view of all the improvements which are daily made or proposed in medicine, cannot be obtained without much expence and great labour.

No one, who wishes to practise medicine, either with safety to others, or credit to himself, will incline to remain ignorant of any discovery which time or attention has brought to light. But it is well known that the greatest part of those who are engaged in the actual prosecution of this art, have neither leisure nor opportunity for very extensive reading. Any expedient, therefore, which would serve to communicate new discoveries, without the necessity of examining a great variety of books, must have some influence in forwarding the improvement of the medical art.

Different periodical publications, intended as the annals of literature in general, are regularly published in this island. These literary journals contain an account of new books in medicine, as well as of those in other arts and sciences. They will, therefore, in some degree, answer the end here proposed. But they consist principally of characters of books; to prove the justice of which, excerpts from the books themselves are sometimes introduced. It is therefore evident that they can serve only to enable those who have leisure for reading to select the most useful publications.

A scheme

A scheme, better calculated for saving time in reading, and expence in purchasing books, is a concise view of the books themselves. It cannot indeed be alledged, that, from this or any other plan, the same advantages will be obtained as from a careful perusal of original works. But, by this means, those who have not leisure for extensive reading, may easily become acquainted with every thing proposed as a discovery in medicine, and with the principal arguments by which it is supported; while those who have, will thus be enabled to select such authors as they themselves imagine best deserve attention.

About twenty years ago, an undertaking of this kind was begun at Leipzig. This well known and valuable publication, which is intitled, *Commentarii de Rebus in Scientia Naturali et Medicina gestis*, is still regularly continued, and may be supposed to supersede any similar attempt with regard to medical publications. But, the distance of the authors of that work from this island, and the number of publications on the Continent of Europe, are probably the reasons why they take notice of few British books, and of these even not till many years after

they have been published. Besides this, from their extensive plan, they can take in but few books at a time ; thus their account even of German books is in general very late. It may farther be added, that these Commentaries are seldom to be met with in this country, till a considerable time after they have been published. It is evident, therefore, that they do not answer all the purposes which might be expected from such a scheme ; and that they are of less service to the medical people in the British dominions than in other countries.

From these considerations we have been induced to undertake a similar publication in this country, which we propose to execute on the following plan. It will form annually one volume in octavo, consisting of four parts, one of which will be published quarterly. Every part will comprehend four sections, treating of the following subjects : An account of the best new books in medicine, and those branches of philosophy most intimately connected with it ; medical cases and observations ; medical news ; and a list of new medical publications.

The account of new books, which is intended as the subject of the first section, will be the principal

cipal part of this work. In this section, we propose to give a summary view of all the best medical books, and of all the remarkable medical papers contained in the transactions of public societies, as soon after these publications shall appear, as the nature of the work here proposed will allow. We will particularly endeavour to lay before our readers every thing which is proposed as a discovery or an improvement in any branch of medicine, but especially in practice. As it is not our intention to offer any opinion with regard to the general characters of books, we shall, on every occasion avoid, as much as possible, either applauding or condemning any author. Our chief aim will be, to give such a view of books as may enable every reader to judge for himself.

The second section is intended for medical observations. Although several collections of medical essays are at times published by respectable societies in Britain, yet it may with confidence be affirmed, that many practical remarks, which would tend much to the improvement of medicine, are lost, from the want of a proper channel by which they can be speedily communicated to the public. To remedy this inconvenience, we propose to admit into this publication, any medical

cal or philosophical observations which can be contained in a small compass. With this view, we invite all attentive and candid practitioners to communicate to us any particulars, which, altho', from their brevity, they may scarce seem to claim a place in larger collections, would tend to the improvement of medicine. We would not be understood to promise, that every thing transmitted to us shall be published. But, it is by no means our intention to reject observations, merely because they may differ from our own opinions. We are not ignorant that candour and liberality of sentiment are the only means by which we can secure an extensive or useful correspondence.

The subject we propose for the third section is medical news. Under this article we mean to give a short account of intended publications, and of any improvement made, or proposed in medicine, which, although not published, may have been the subject of conversation. To this we shall subjoin accounts of learned men and societies, and any other articles of medical intelligence which we imagine will be acceptable to our readers.

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The last section will consist of a list of new medical books. As the first section is meant to be confined entirely to those books which have either utility or novelty to recommend them, it may be concluded that no notice will there be taken of many new publications. But, for the satisfaction of those who may be deprived of other methods of information, in the end of each part, will be given a list of the medical books published, both in this and other countries, during the three preceeding months. We cannot, indeed, pretend that this list will in any case be a complete one ; but it will be our endeavour to render it as much so as our situation will allow ; and we are hopeful we shall be able to obtain intelligence of every material book.

Having pointed out the intention and plan of this periodical work, we imagine it unnecessary to adduce any farther reasons for its appearance. If it cannot apologise for itself, all that we could say in its favour would be ineffectual. From the nature of the work we have undertaken, we can lay claim to no great merit ; and we are hopeful, we shall afford no foundation for very severe censure. We esteem it, therefore

fore, less necessary to solicit the indulgence than the assistance of our readers. All medical papers, whether we afterwards use them or not, will be thankfully received, and properly acknowledged. Those who incline to favour us with any materials, may transmit them to the booksellers for whom this work is published; or to Dr Andrew Duncan physician in Edinburgh, who is secretary to our Society.

MEDICAL

M E D I C A L
AND
P H I L O S O P H I C A L
C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

A Treatise on the Puerperal Fever, by Nathaniel Hulme, M. D. Physician in ordinary to the City of London Lying-in Hospital, and to the General Dispensary for relief of the Poor. 8vo, London.

THE puerperal fever is a disease very fatal to lying-in women. In the treatise now before us, Dr Hulme undertakes to represent the nature and cause of this disease in a new point of view ; to illustrate his opinion by dissections ; and to point out a rational method of cure, which has already been confirmed by his own experience.

Our

Our author sets out with a description of this disease. After giving a full detail of the symptoms which attend it in its most simple state, he observes, that it may be complicated with any disorder under which the patient might labour at the time of child-birth. But the diseases with which it is most frequently complicated are, phthisis pulmonalis, and peripneumony. It is likewise, on some occasions, joined with the miliary fever; but he affirms that these two diseases are, in their nature, totally unconnected; and that, when this combination does happen, it is to be ascribed to an over-heated room, warm regimen, or heating cordials. Upon the whole, from the history of the puerperal fever, he concludes, that it is a disease of a nature peculiar to itself; that it is for the most part as simple and regular in its appearance as any disorder incident to the human body; and that it may in general be distinguished by the following pathognomonic symptoms; an acute pain and great soreness over the lower part of the abdomen, attended with a fever, and commonly a pain in the fore-head happening soon after delivery.

The diseases with which it has the greatest chance of being confounded are, After-pains;
the

the milk-fever ; the miliary fever ; the iliac passion ; the flatulent cholic ; an inflammation of the uterus ; and the cholera morbus. But, from all these, our author thinks it may readily be distinguished by the symptoms already mentioned as characterising it, and by the diagnostic marks of these diseases.

After the history, our author next gives the prognostics in this disease. He observes, that nurses, who are in a great measure ignorant of such a disease as this being incident to lying-in-women, should be taught to dread the name of puerperal fever, as much as they would dread the name of pestilence or plague,

According to Dr Hulme, much is to be learned from the state of the pulse, particularly with respect to number. If, from a hundred and twenty-eight or thirty, it become for some days gradually slower, it may be esteemed one of the best signs ; but, if it continue uniformly high, quicker, or even be found changeable, it threatens danger, and should always create suspicion. Nay, although the disease should seem in other respects to be gone, yet, if the pulse continue quick, a relapse is always to be feared. A diarrhoea, followed by a slower pulse, prognosticates safety.

safety ; but, if it have not this effect, it is to be reckoned a dangerous symptom. As symptoms portending danger, our author mentions, the disease coming on soon after delivery ; pains affecting the breathing ; want of sleep ; the tongue becoming dry, rough, and changing its colour ; a fixed livid hue on the cheeks ; crude urine ; green or black coloured vomitings ; the pulse so quick and small as not to be numbered ; involuntary stools ; and cold clammy sweats on the extremities. The signs of recovery, on the other hand, are, the patient turning herself and lying on her side ; a moist, soft, and clear tongue ; general sweats, after which the pulse becomes slower ; a fresh flow of the lochia ; and turbid urine with a thick sediment of a yellow colour, tinged with purple or red.

Dr Hulme next presents us with the dissections of six patients who died of this disease. He first gives us a particular history of each case, and then mentions the appearances after death. In general he found the omentum and intestines inflamed and mortified, and in the cavity of the abdomen, putrid sanies, foetid air, or pus. In all his dissections, the uterus was found contracted to its natural size, and perfectly sound.

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In the fourth chapter, our author lays down the method of cure, which he divides into two kinds, the *simple* and the *complex*.

In the simple cure, the first intention which he seems to have in view is, to clear the intestinal canal. For this purpose, he proposes a simple emollient opening clyster, which has the peculiar advantage of causing an immediate discharge. If the clyster does not afford great relief, it is necessary to have recourse to gentle cathartics. A solution of the *sal catharticus amarus* in water, the *oleum ricini*, the *tartarum emeticum*, and the *vinum antimoniale*, are the remedies Dr Hulme has found to answer best.

After clearing the intestinal canal, he next proposes that a gentle diaphoresis should be promoted, by such medicines as neither bind the belly, nor are heating. Wiht this intention, he advises ipecacoanha, tartar emetic, or antimonial wine combined with gentle opiates; and, in the intermediate times, Riverius's saline draughts. If sickness at stomach, or vomiting occur, the efforts of nature must be assisted by drinking plentifully of chamomile tea or warm water. According to our author, the common drink of pa-

tients labouring under puerperal fevers, should be of a mild, cooling, and diluting nature; and the use of cordials, wines, and spirits of every kind, is to be strictly prohibited. Neatness and cleanliness are particularly to be attended to. All bandages about the trunk of the body are to be avoided; and the infants are to be put to the breast very soon. He inveighs in very severe terms against the pernicious effects of over-heated air, and warm regimen; and advises that the patient should be kept in a large and cool room. At the same time, he tells us, that he does not mean to recommend, but to avoid extremes, and to be guided always by the circumstances of the case.

After this disorder is by these means abated, or seems to be gone, he recommends attention to the state of the bowels. The belly must be kept gently open; and the due tone of the intestines restored, by small quantities of chamomile tea, or a slight infusion of juniper-berries, with a few drops of elixir vitrioli acidum. After this, cooling diet, fresh air, Peruvian bark, and gentle exercise, will confirm the cure.

Dr Hulme concludes his observations on this subject with observing, That he has paid no regard to the obstruction of the lochia. This he
confi-

considers as the effect, not the cause of the disease. He alledges that this discharge will return when the disease is cured ; while, on the other hand, uterine remedies are not only inefficacious, but highly noxious.

The author next proceeds to the treatment of this disease in its most complicated state. If a diarrhoea occur in the beginning of the disease, he advises that it should not be checked, but encouraged, by drinking plentifully of mild aperient liquors. If these methods should prove insufficient for throwing off the offending matter, he advises that recourse should be had to the purgatives and emetics before recommended.

When violent stitches in the sides, or over the pit of the stomach, accompany the pain of the hypogastric region, Dr Hulme advises bleeding. He observes, however, that authors have differed much with respect to bleeding in this disease; some laying it down as absolutely necessary, while others strongly oppose it. He gives it as his opinion, that there are cases in which it is highly necessary, and others in which it is highly improper. The best criterion to judge by, he alledges, is the pulse and period of the disease. If the pulse be full, and vibrate strongly against the

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fingers,

fingers, bleeding is proper at any period, but particularly in the beginning. He thinks, however, that in this disease it is safer to err in point of bleeding too little, than too much.

When peripneumonic symptoms occur, blistering, says our author, cannot be dispensed with. If in puerperal peripneumony the pulse begins to flag, and the disease puts on a putrescent state, the patient must be supported by cordials. The author considers all cases of puerperal peripneumony as highly dangerous. He advises that not a moment should be lost, but that the cure should commence, if possible, within a few hours of the attack, with all the power of art.

Stitches from flatulencies, our author observes, will go off from procuring a stool by a clyster, or otherways. But, if this fails, they may be dispersed by a draught prepared with *asa foetida* and a few drops of the Thebaic tincture.

For a troublesome cough, Dr Hulme advises a blister; *spermaceti* draughts; or a small quantity of foetid tincture in a solution of gum ammoniacum.

When the pains of the abdomen resist the means already proposed, fomentations, emollient

lient cataplasms, and blistering the abdomen, must be tried in succession.

When the puerperal fever proves very violent, whether single or combined, it generally terminates in diarrhoea. In this critical state, the chief intentions of cure are, to moderate the effects of nature; to endeavour to keep up the vis vitae; and to correct the putrescent state of the solids and fluids.

In the fifth chapter, the author presents us with the sentiments of many of the most distinguished writers relating to the cause of the puerperal fever. He arranges them according to the order of time, and has here given us the opinions of Hippocrates, Avicenna, Raynalde, Platerus, Sennerthus, Riverius, Willis, Sylvius, Mauriceau, Sydenham, Boerhaave, Strother, Hoffman, De la Motte, Burton, Smellie, Tissot, Van Swieten, Astruc, Cooper, Denman, Johnson, Millar, and Manning. From the citations produced, it appears to have been the opinion of authors, from the time of Hippocrates to this day, that the puerperal fever principally arises, either from a suppression of the lochia, an inflammation of the uterus, a retention of the milk, or from some complaint peculiar to the uterus.

Dr Hulme concludes this treatise with his own opinion concerning the cause of this disease, which is the subject of the sixth chapter. He is of opinion that the proximate cause of the puerperal fever is an inflammation of the intestines and omentum. For the truth of this he appeals to dissections.

He apprehends the chief predisposing cause to be the pressure of the gravid uterus against the intestines and omentum. The general effects of the pressure are, an interruption of the free circulation of the blood, and a destruction of the tone of the blood-vessels. The nearer that delivery approaches, the mischiefs from compression will be greater. And, upon the birth of the child, the vessels on which the uterus chiefly lay, will be immediately filled with blood; but, from their weak state, they will hardly be able to propel forwards their contained fluids. From all this our author concludes, that the intestinal canal must particularly suffer; especially at its inferior part, where there is the greatest and most constant pressure, and where it is not covered with the omentum. This opinion, with regard to the effects of pressure on the intestines and omentum,

mentum, is corroborated by some observations from Bauhin, Ruysch, Van Swieten, and Morgagni. The chief occasional causes of this disease, according to Dr Hulme, are all those accidents after delivery which are capable of increasing the circulation of the blood; and all causes, during pregnancy, which contribute to bring on a corruption of the blood and juices.

From differences in these causes, particularly in the predisposition, our author accounts for the different degrees of violence, which from his own experience he has marked in this disease. From these differences he thinks it easy to assign a reason for its being a disease in some cases the most easy, and in others the most difficult to cure.

He next applies the causes he has assigned for this disease, to account for its symptoms. The depraved liquids found in the cavity of the abdomen and pelvis, he ascribes to the corruption of the volatile lymph, from the diseased state of the intestines and omentum; the pus, to the inflammation on the surface of the omentum; the great inflation of the stomach and intestines, to their being rendered, in some degree, paralytic; and the adhesion of the intestines to each other, to inflammation assisted by pressure.

What he esteems the most unaccountable circumstance, is the surprizingly quick progress of the disease. This he ascribes to the state induced in the omentum and intestines, by the compression and friction of the gravid uterus during labour, by which they are almost in a state of inflammation in most women, at the time of delivery ; to the insensibility of the omentum ; to the disease beginning at its lower part ; and to the primary degrees of pain being mistaken for others of a different nature.

Upon the whole, it appears, that Dr Hulme differs in his opinion, with regard to the cause of this disease, from all who have written before him. In doing so, he defends himself by alledging, that he has drawn his notions of it from a course of reasoning, supported by dissections ; and has grounded his theory upon a careful examination of all its symptoms.

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II.

Antonii de Haen. S. C. R. A. *Majestatis consiliarii et archiatri, &c. Ratio Medendi continuata. Tom. 1. Pars 1. 8vo, Vien. Aust.*

DR de Haen has already written several volumes, under the title of *Ratio Medendi*. He proposes still to continue in communicating to the public practical remarks upon the same plan. But he informs us, in an advertisement prefixed to this volume, that he has now changed the title, to that of *Ratio Medendi Continuata*. Under this title, two parts of the first volume are already published.

In the first of these parts, our author treats of the malignant diseases most nearly connected with the plague, and concludes with the plague itself. In enumerating the malignant diseases, our author affirms, that there is no acute disease from the *Ephemera*, when protracted, to the plague itself, which may not fall under this denomination. He observes, that the best account of the symptoms of malignity in general, is that given by Dr Boerhaave in his pathology ; but that a difference in
degrees

degrees of malignity may be inferred from various circumstances, particularly the progress of the symptoms, the condition of the patient before the attack, the nature of the epidemics raging at the time, and the obstinacy with which it resists remedies. According to our author, malignity may be counteracted, by the use of pure, moderately warm, and frequently renewed air; by cleanliness in cloathing and bedding; by making the bed, at least once, but, if convenient, oftener, every day; by refrigerant drinks and medicines; by attention to the efforts of nature; and by avoiding all causes which accelerate the motion of the fluids.

After these general observations, the author proceeds to consider particular diseases; and, *first*, he treats of the method of avoiding, moderating, and curing malignity in the small-pox. On this subject, he presents us with the history and treatment of five cases, from which he deduces the following consequences. 1. That the effects of a bad habit of body, previous to the attack of the small-pox, as increasing or diminishing their malignity, is very uncertain. 2. That the time, at which small-pox are capable of communicating infection is uncertain. 3. That the time of eruption is uncertain. 4. That the utility and necessity of

of free air in every acute disease, is particularly confirmed in small-pox. 5. That bathing the feet and hands in warm water has the advantage of diluting the blood, and relaxing the skin, by which means the virus of the small-pox is more quickly expelled from the viscera. 6. That the advantages alleged to arise from opening the pustules are well founded. 7. That repeated bleeding, at every period of the small-pox, is, in many cases, absolutely necessary for the preservation of life. 8. That a mixture of milk and water is the best drink in small-pox. And, 9. That nothing has greater influence in diminishing or preventing the malignity of the small-pox, than a frequent change of bed-cloaths, and indulgence in any amusement which can produce cheerfulness. From these conclusions, our author adduces some objections against the arguments which are brought in favour of inoculation. From comparing the London bills of mortality, for different years, he finds, that a much greater number have died of the small-pox, since the introduction of inoculation, than before. From this he concludes, that, even allowing inoculation to be of service to individuals, it is unquestionably prejudicial to the public. Having pronounced inoculation ineffectual, he next considers,

siders, by what remedies the malignity of the small-pox may be diminished. On this subject, he presents us with the sentiments entertained by different eminent writers, concerning antimony and mercury. He observes, that, as inoculation has been found no less successful without, than with them, the advocates in their favour must allow their inefficacy ; but that at the same time it is clear they have been given to many thousands, without any bad consequences. He is of opinion, therefore, that no reason remains why we should oppose the authority of those great men who have recommended them. Hence he concludes with recommending their use to people in general, so soon as the small-pox become epidemic.

On the measles, our author tells us, it is unnecessary for him to offer any observations, on account of their similarity to the small-pox, of which he has already treated, and to the scarlet-fever, of which he next proposes to treat.

In treating of the scarlet-fever, which is the subject of the 7th chapter, Dr de Haen, as he had before done with regard to the small-pox, sets out with some histories of the disease ; and he has here presented us with a particular detail of three
cases

cases in which it was malignant. From these he concludes, that bleeding and Peruvian bark are remedies highly necessary in the scarlet-fever; that different and improper names may be found affixed to this disease by eminent writers; that varieties in climate have produced differences in the descriptions which have been given of it; and that it has often been described by authors in such a manner, as to be confounded, on the one hand, with the rash, and, on the other, with the measles. He concludes his observations on this subject with some remarks on the cure.

In the *first* stadium, he trusts to repeated bleedings, and the liberal use of Peruvian bark. He observes, that, if this last remedy can, with advantage, be employed for a long time, and in large doses in any disease, it should be so in scarlet-fever.

In the *second* stadium, the circumstance chiefly distressing to patients, is a general leucophlegmatic swelling of the whole body. For the removal of this, Dr de Haen recommends diuretics and purgatives. From the almost impenetrable state of the surface, he is of opinion, that sudorifics are seldom, if ever, to be employed. During the use of antiphlogistics, diuretics, and purgatives, the bark must not be omitted, particularly, if it open
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the belly. He concludes with mentioning a remedy, which, upon the authority of Plencize, has been recommended as highly efficacious in this disease. The *formula* is as follows: *℞ Rhei electi, spir. sal. coag. āā. dr. ii. Merc. dulc. Aur. fulmin. Extract. scil. āā. dr. i. Rob. junip. q. s. ut f. pil. gr. i. vel ii.* One or two of these pills taken three or four times a-day, are said to be powerful evacuants of serum, both by stool and urine. But they must not be employed, if the feverish symptoms run high; and particular caution is necessary, that the *aurum fulminans* be properly prepared.

Dr de Haen has already frequently treated of miliary and petechial fevers. Here, therefore, he passes them over, and proceeds, in his ninth chapter, to the consideration of malignant fevers, strictly so called. On this subject, he presents us with a detail of two cases. These cases lead him to consider the opinions of some eminent men, who maintain that all acute diseases may be divided into those which proceed from, or are attended with spissitude; and into those which proceed from, or are attended with a dissolved state of the fluids. After examining this opinion at considerable length, he concludes, that it is ill founded, and may be highly prejudicial in practice,

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The last malignant disease, of which our author treats, is the plague. He rejects the distinction between plague and pestilential fever as useless, and even prejudicial. He observes, that, when the plague commences, it is often difficult to distinguish it from other malignant fevers ; but advises that the same cautions should be used in the one case as in the other. He would not, however, on this account, have patients confined to lazaretto's, which he represents as highly prejudicial, on their present footing. He imagines the infected might be cut off from communication with the sound, and, at the same time, allowed the benefit of free air. For this purpose, he advises, that lazaretto's should be spacious buildings, high roofed, and constructed with numerous doors and windows, kept frequently open ; that they should never be crowded with patients ; and that they should be provided with every possible assistance. But all these precautions will, he imagines, be very ineffectual, unless some other method be followed in the cure of the plague, than has hitherto been put in practice. He observes, that the physicians of all nations, for many ages past, have discharged bleeding in the plague, upon the supposition, that it will increase the great debility
which

which attends this disease. Our author combats this opinion, and recommends the liberal use of the lancet. In support of this, he adduces the authority of the Dutch Consul at Smyrna, a place where the plague frequently rages. By him he is informed that those practitioners have there the greatest success in private practice, who treat their patients with large and repeated bleedings and mineral acids.

III.

III.

Antonii de Haen, S. C. R. A. *Majestatis consiliarii et archiatri, &c. Ratio Medendi Continuata.*
Tom. 1. Pars 2. 8vo, Vien. Aust.

IN a former part of the *Ratio Medendi*, Dr de Haen had treated, at considerable length, concerning the effects of hanging and drowning. Instigated by the more successful, but not more laborious endeavours of the society at Amsterdam for recovering drowned people, he again undertook a course of experiments on this subject. He apologizes for the appearance of cruelty in his experiments, from the service they may afford to mankind, and from the dearness of corn at the time, which often rendered dogs too expensive to their masters.

He sets out with an abstract of the third volume of the transactions of the society at Amsterdam. He observes, *1st*, That many of those who recovered, had been but a few minutes under water,

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some had been a quarter of an hour, others half an hour, and one a whole hour. *2dly*, That, of the fifty-three cases which are given, forty-eight had medical assistance, immediately upon being taken out of the water, one within a quarter of an hour, three within half an hour, and the remaining one within three quarters of an hour. *3dly*, That, in nineteen patients, signs of life were very soon perceived; in six others, within three hours; and in fourteen, who recovered, the time is not mentioned. *4thly*, That remedies were continued for two, three, six, eight, and sixteen hours, after signs of life appeared. *5thly*, That, of those who recovered, one, who had been drunk before he fell into the water, died in two days; another, who had scarcely been cured of a pleurisy, died in five days; a third after the first appearances of life; a fourth, who had been suspended by the feet, and roughly shaken, after two hours; a fifth, within six hours after the first appearances of life; and a sixth, who was sixty years old, and had been roughly shaken on a cask, died after the third day; so that a sixth part survived their recovery but a short time: And, *6thly*, That seven recovered who had a blackness in the face, and who had discharged a quantity of froth from the mouth and nose; one had a fever afterwards, and the face

face of another remained swelled and livid for a considerable time. To these are added some other cases of the recovery of drowned people communicated to the society by correspondents.

Our author then proceeds to enumerate the remedies by which these recoveries were effected. These were, agitation of all kinds ; every sort of stimulus applied to the mouth, nose, and rectum ; bleeding ; heat, both by warm cloaths, and warm water ; blowing air into the trachea ; stimulants consisting of blisters, warm ashes, and the like, applied to the head, ancles, thighs, pit of the stomach, and other parts.

After this review of what had been done by others, Dr de Haen proceeds to relate his own experiments. Two bodies were brought to him which had been found swimming in the Danube ; but as they were already in a corrupted state, he esteemed it unnecessary to attempt any cure. A boy who had fallen into a well, which was then full of water and dung mixed together, was taken out cold, a quarter of an hour after the accident. At the end of twenty-six hours he was brought to the hospital. He was there wrapt in warm cloaths, two ounces and a half of cold thick blackish blood were taken from the jugular vein,

and every kind of stimulus was used, but in vain. The next case our author mentions is that of a student who was found in the Danube : But no account could be given how he came there, or how long he had been in the water. It appeared that he had fallen in with some force, as there was a contusion on his forehead. Every means of cure was tried, but proved ineffectual. Another case, which is here related, is that of a joiner. Those who found him put a rope about his neck and lifted him up for every passenger to view. About ten or twelve hours after he had fallen into the water, he was brought to the hospital. But, although eight ounces of cold black blood were drawn from the jugular vein, and every other means of cure was used, he could not be recovered. The last case mentioned by our author is that of a workman who fell from the turret of a citadel, into a lake, with his head downwards. He disappeared for a quarter of an hour, and was taken up without signs of life. But, after being exposed to the sun, and shaken by the feet, he seemed to fetch a deep breath. He was then put to bed, and, by means of various stimuli, soon recovered entirely. From this Dr de Haen observes,

erves, that his want of success seems principally to have been occasioned by delay.

In the second chapter Dr de Haen relates his experiments on dogs, which are fifteen in number. Twelve dogs were drowned, and, though some of them were taken up after being kept under water for a few minutes only, none of them could be recovered. The water in which they were drowned was tinged, but it did not appear in their stomachs. Upon dissection, in seven of them there appeared signs of the water having been inspired. In two the lungs were free. In two the meninges of the brain and lungs were inflamed. And two were not opened.

Three dogs were hanged, and attempted to be recovered by the means recommended by Lord Verulam, Morgagni, and others, but without effect. In one nothing remarkable appeared in the lungs. In another, from whom an ounce of blood was taken from the jugular vein, the dura and pia mater were of the natural appearance, but the lungs were much inflamed. In the third, the meninges were found, and there was no effusion in the ventricles of the brain, but the left lobe of the lungs was turgid with blood.

In the succeeding chapter, we are presented with some observations on these experiments. The bad success which Dr de Haen had with the men, he ascribes to the length of time which intervened before remedies were tried. Nor does he think this invalidated by the death of the dogs, although for their recovery remedies were immediately tried; because dogs are naturally worse to recover than men, as they are kept forcibly under the water, which is not the case with men; and as he would have been able, had he inclined, to have recovered one in sixteen, which he thinks, would be no inconsiderable proportion, even in the human species.

He next attempts to explain the reason for the diversity of opinion concerning the cause of death in those who have been drowned. This he ascribes to partial conclusions from a few experiments. Some having never found water in the lungs, thought it never was there; and others, from its presence, drew a contrary conclusion.

Some have ascribed the death in such cases to that species of apoplexy which arises from a great fulness of the stomach. This opinion our author rejects, from the want of such fulness in the thirteen dogs he dissected; from the want of
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the common marks of apoplexy upon the dissection of the brain; and from the actual presence of water in the lungs. He is of opinion that death, in consequence of drowning, happens from the water getting into the lungs, and stopping the blood in the arteries. He then discusses the question, how far blowing air into the lungs is useful in recovering drowned people. If their death is to be ascribed to the water entering the lungs, this practice, he observes, must be hurtful, as it will increase the pressure on the blood-vessels, or may even force the water into them, which, upon the authority of Louis's experiments, he alledges is possible. But, in spite of this reasoning, he asserts that, from experience, it has been found useful. In support of this, he produces the authority of Becker, Littraeus, Senac, Petit, the Count de Maurepas, and of Louis himself. As this testimony throws some doubt on his former experiments, he promises to resume the subject hereafter.

The author, in the fourth chapter, proposes to examine, whether the same remedies should be employed for the recovery of hanged as of drowned persons. For this purpose, he observes, it is necessary to ascertain the proximate cause of death

from hanging. Upon consulting authors, he found that Wepfer, Littraeus, Alberti, Bruhierius, and Boerhaave, have ascribed it to apoplexy. Their arguments for this are chiefly drawn from the livid colour of the face and head; from the turgescency of the vessels of the brain; from the inflammation of the eyes; and from the sparks of fire which those who have survived hanging alledge they have perceived from their eyes. On the contrary, Bonetus, Petit, Haller, and Lancisi, from observing that death is induced by any small body falling into the glottis, have ascribed it to the stoppage of respiration. Others, deeming both these causes ill-founded, have ascribed it to a luxation of the vertebrae of the neck. The opinions on this subject are concluded with some remarks from Morgagni, Van Doeveren, and Stolte.

He next adduces the authority of many eminent authors in proof of the possibility of recovering people who have been hanged; and observes, in general, that with bleeding in the jugular vein, and anointing the neck with warm oil, the same remedies are to be employed in this case, as for the recovery of drowned people.

Having

Having given the sentiments of others, Dr de Haen proceeds in the next chapter to relate some new experiments which he made with a view of ascertaining the cause of death, both in people hanged and drowned. He here presents us with seven experiments on dogs, four of which were hanged, and three drowned. Upon dissection, he finds evident marks of congestion in the lungs, but no affection of the brain.

To these experiments he subjoins several remarks. He observes, *1st*, That, when the brain appears affected, after hanging or drowning, it must be ascribed to an old headach, or some such cause. *2dly*, That the death of people hanged is not to be ascribed to luxation or fracture of the vertebrae of the neck. *3dly*, That, by the ligature put round the neck in hanging, the trachea is completely shut. And, *4thly*, That death, from hanging or drowning, is to be ascribed to the same cause.

In the next chapter, our author presents us with farther experiments and observations from dissection. Upon examining the body of a man who was drowned, he found the lungs tumid; and, though wounded, they did not collapse; upon pressure, he squeezed from them half a pound of reddish frothy matter. Upon dissecting another,

ther, who was hanged, he found that the cord had not pressed upon the trachea, but upon the part between the scutiform cartilage and the os hyoides, and that the compression had been imperfect. In this man the pia mater was very red; under the tunica arachnoidea a quantity of whitish serum was found, and the brain appeared to be interspersed with many red vessels. The lungs were tumid, did not collapse upon being handled, and, when cut, poured forth blood rather than froth.

The affection of the brain which was here observed, our author ascribes to some chronic disease, and imagines that, from the compression not being complete, the appearances in the lungs were less considerable than would otherwise have been the case.

In the seventh chapter, Dr de Haen examines the propriety of suspending drowned people by the feet. He allows that this practice will be hurtful from determining to the head; but observes, that we frequently use hurtful remedies, when the advantages derived from them preponderate; and is of opinion that it will be useful, by agitating the viscera against each other, and thus re-
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newing their motions. He next considers the propriety of laryngotomy. On this subject he adduces many objections against the opinion of Dethardingius, who is a great advocate in its favour. He imagines that many advantages which have been derived from it, are to be ascribed to the irritation in consequence of the rude manner in which it was performed. But promises to consider its effects hereafter, by farther experiments. He concludes this chapter with some respectable authorities to prove, that hanged people are to be recovered in the same manner as drowned people.

The eight and last chapter is employed by our author in obviating two objections which had been brought against his doctrine. The first is, that people have often been recovered who had lain several days and hours under water, although few or no means were attempted for their recovery. To this he answers, that the time for which people are under water, in many cases, cannot be ascertained; and that the many improbable stories which are told sufficiently invalidate the rest. The second objection is, that there is reason to suspect that the means of cure
which

which our author has recommended would often extinguish any remaining sparks of life. To this he answers, that, in cases where a recovery takes place, tokens of life appear at very different times, and that he never would advise severe or tedious methods of cure where more gentle and more expeditious ones were not first tried without effect.

IV. Joannis

IV.

Joannis Friderici Meckel, *Nova Experimenta et Observationes de Finibus venarum et vasorum Lymphaticorum in ductus visceraque excretoria Corporis humani, ejusdemque Structurae utilitate*, 8vo, Lugd. Bat.

IN this treatise Dr Meckel sets out with some observations on the opportunities which still remain of adding to our knowledge of the structure of the human body. He observes particularly, that the doctrine of secretion still remains involved in great uncertainty. And he concludes his introduction with mentioning the intention of the present work, which is, to point out the different kinds of absorption, and the purposes for which they are intended.

After these preliminary observations, our author, in the first section, proceeds to treat of the return of the lymph into the blood. Upon injecting lymphatic vessels with mercury, he has often found it pass into the red veins, without a-

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ny extravasation ; but the nature of the communication he could not discover, till he happened to inject, by a lymphatic coming from the pelvis, a gland partly schirrous. He there found that mercury entered the sound part of it very readily ; but, when it came to the schirrus, it was obstructed by a weight which supported eighteen inches of mercury. By pressure, however, he forced the mercury into the smaller ducts of the gland ; and then saw it pass through a vein from the gland into the inferior cava. From this he infers, that, when the body is in health, there is a natural communication between the lymphatic vessels and the veins of conglobate glands ; but that this passage is much smaller than that into the lymphatic above the gland. From this structure our author deduces the following physiological observations. He alledges, that, in order to prepare every secreted liquor in the body, absorption from the secreting organ is absolutely necessary ; and that, in the preparation of lymph, this absorption is performed by the veins. He farther observes, that by this structure the lymph will be conveyed into the blood, when the lymphatics are either obstructed or ruptured ; and, by this means, many diseases will be prevented.

Dr Meckel,

Dr Meckel, in the second section, treats of absorption taking place by means of the veins from the mammae. He here gives an account of his having injected with mercury, through the tubes of the nipples, the breasts of women, both soon before and soon after delivery. Upon injecting the mamma of a woman soon after delivery, which still adhered to the muscles of the thorax, the mercury, after having filled the gland, readily passed into the veins of the mamma, and from thence into the trunk of the axillary vein. Upon injecting the breasts of a woman who had died in labour, this communication of the lactiferous tubes with the veins was also found. But, by this injection, he discovered another singularity, for, upon tying the veins and the lactiferous tube at which he injected, the mercury burst through another lactiferous tube of the nipple, and upon tying this, through a third, more remote. From repeated trials in this manner, he concludes, that the lactiferous tubes have a communication with each other. In order to prove that this anastomosis takes place in the extreme branches only of these tubes, our author observes, *1st*, That the communication seems to subsist equally between the nearest and the most distant branches. *2^{dly}*, That he inserted the tube
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into which he injected below the nipple. And, 3^{dly}, That, after trying every means in his power, he was never able to discover the lactiferous circle described by Nuck. This communication of the veins with the lactiferous tubes, our author imagines, is necessary, both for the preparation of the milk, and for its return into the blood in those who do not suckle. He observes, that, for the preparation of milk, the lymphatics serve to carry off the superabundant aqueous parts of the blood, and the veins the saline and earthy parts; so that nothing but the bland butyraceous part is left to pass through the lactiferous tubes. From this communication also, he infers, that those who have ascribed diseases to the return of the milk into the blood, have greatly erred. On the contrary, he alledges that the absorption of this bland fluid into the blood, is not only natural, but even useful. He farther observes, that, by this structure, the resolution of obstructions of every kind is greatly facilitated; and that we should endeavour, in every case of the stagnation of milk, to promote its return through the veins by applications which tend to relax them, and to increase the action of the small vessels.

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In the third section, the author treats of the absorption of semen from the vesiculae feminales. Upon injecting the vesiculae feminales of a stout man, after tying the ejaculatory tubes, he filled the hypogastric vein, and the venous plexus surrounding the vesicles. Upon tracing the veins thus injected, he found them arising from the cavity of the vesicles. In this experiment, no lymphatic was injected. Having repeated the experiment several times, he found, for the most part, the same appearances; but he acknowledges that he could not inject the vein on every trial.

Dr Meckel alledges that this structure is intended for the return of such parts of the semen to the blood, as he supposes are too viscid to be reabsorbed by the lymphatics. Hence he concludes, that we need not be apprehensive of an accumulation of semen in the vesicles; and that, if this complaint should occur, it is to be obviated by such remedies as tend to facilitate the circulation, and not by corroborants and astringents, which might be supposed to promote absorption.

Dr Meckel, in the fourth section, treats of the influence of absorption upon the bile. Having frequently injected the lymphatics of the liver through the biliary ducts, he adds, that by pressing

fluids still farther, he has also injected the vena cava. He could not, however, by any force, or by any method, push his injection into the vena portarum, or hepatic artery. After these injections, upon examining the liver with the greatest accuracy, both with his naked eye and good glasses, he never could discover any extravasation. He farther observes, that, when extravasation took place, the passage of the injection into the lymphatics and veins was impeded.

This structure, our author imagines, is intended for carrying off the aqueous parts of the fluids, that the bile may be prepared and perfected. From this also, he accounts for the ready passage which the bile finds into the blood, when the ductus choledichus is obstructed, as happens in jaundice; and for the yellow colour which happens in hydropic cases, as the bile is then more watery in its nature than usual.

The subject of the last section is the absorption which takes place from the bladder. Having endeavoured to inflate the bladder by the urethra, our author found, that all the air passed through the vesicular véins, and from thence into the trunk of the hypogastric veins. He also observed the same appearances upon the injection of water.

As the bladder was, to all appearance, in a sound state, our author concludes, that there is always a passage for fluids through its veins. This structure, he imagines, is intended for conveying the subtile watery lymph from the bladder; and for preventing the urine from stagnating long there, and thus becoming acrid. He imagines that this opinion is confirmed by those cases in which a considerable quantity of a fluid, resembling urine in colour and smell, has been discharged from the arm-pits, upon a suppression of the natural excretion of urine.

V.

Reflexions on the General Treatment and Cure of Fevers. 8vo, London.

NO name is printed on the title page of this treatise; nor could the author, with justice, assume to himself the merit which may be due to those new opinions it contains. We are here presented with a concise, but tolerably distinct view of the doctrine of fevers, which has, for several years past, been delivered by one of the professors of medicine in this university. The author, in his preface, inculcates the importance of attending to fevers at their commencement. The first section treats of fevers in general; our author here follows Dr Cullen in excluding the febris continens, and gives it as his opinion, that the only genera of fever, distinctly marked, are three; the nervous, intermittent, and inflammatory. As the last of these is neither contagious, nor arises from any determined source of infection, he proposes to confine his reflexions to the two former.

The second section treats of intermittents, under which term he likewise includes the remittents. He
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endeavours to prove, from many respectable authorities, that they are the same in all climates ; and that they are produced by 'marsh miasmata, by which he means poisonous vapours arising from swampy grounds, lakes, woods, or the like. He is inclined to believe, that intermittents are contagious, as the dysentery, to which they are nearly allied, is allowed to be so. He concludes with observing, that, from the different degrees of activity of the marsh miasmata, or from the different states of the persons exposed to them, the fevers they produce will vary in their appearance ; from which he accounts for the numerous distinctions of authors.

He proceeds, in the third section, to consider the nervous fever. This disease, he alledges, arises chiefly from contagion, and is characterized by a small, weak, frequent pulse, despondency, and a sudden diminution of strength.

In treating of the actual sources of fevers, in the fourth section, he observes, that all the variety of intermittent and continued fevers probably derive their origin from marsh miasmata and common contagion ; but in what the virulence of

these sources of fever resides, he alledges, is yet undetermined.

He proceeds, in the fifth section, to consider marsh miasmata more particularly. He observes, that, from this source chiefly, if not solely, all intermittents are produced. For the production of these miasmata, according to our author, heat and moisture must be conjoined; neither of them separately being sufficient. The subject of the next section is human effluvia or contagion. This he refers to an exhalation from the human body under disease, and assigns as the principal cause of nervous fevers.

In the seventh section, the author contends, that cold alone can never produce epidemic intermittents, or nervous fevers. He allows, however, that, united with miasmata or contagion, it may have considerable influence in modifying fevers; although it can be esteemed only a remote cause.

In the eighth section, the author offers some reflections on the diseases of the fluids in general. Morbid deviations, in these, he observes, have been considered as the cause of many diseases. But to this source he thinks that a few of the cachexiae only can, with propriety, be referred. He is of opinion,

nion, that the supposition of lentor or viscosity, and acrimony of the blood existing in the system, as causes of fever, may be totally rejected as hypothetical and improbable.

In the ninth section, our author presents us with a detail of the symptoms of fever; and, in the tenth, with some reflections on these symptoms. From a view of what takes place in every paroxysm, he thinks there evidently appears, in fever, debility, spasm, and increased action; the last he considers as the effect of the two former. He concludes, therefore, that debility and spasm form the proximate cause of fever; and the increased action, with the subsequent sweat, the natural cure. From these considerations, he deduces the two following indications for the cure of fevers.

I. To remove the spasm by such remedies as relax the capillary or extreme vessels.

II. To strengthen the system, in order to prevent the recurrence of a fresh paroxysm.

Having offered these reflections on the nature of fevers, our author next proceeds to treat of their cure. In the eleventh section, he offers a few general observations; and, in the ten succeeding ones, treats of particular remedies.

He observes, that few symptoms indicating bleeding occur in those fevers which are the subjects of this essay; and that it behoves every practitioner to be deliberate in advising this remedy in remittent and nervous fevers, especially where they are characterised by great debility, a general dislike to motion, a weak, soft, low pulse, and dejection of mind. But, where this remedy must be employed, he observes, that it is more necessary, useful, and easily borne, in the fevers occurring in spring than in autumn. In fevers attended with putrefaction, bleeding, he alledges, must be entirely rejected; but he adds, that the symptoms, not the name of the disease, should direct the use of the lancet.

Emetics have been given in fevers, either to excite full and frequently repeated vomiting; or to produce nausea and sickness, with little or no vomiting. The first, he observes, is necessary to evacuate the stomach, and emulge the excretories. In either way they tend to take off spasm. But the latter, he alledges, is to be preferred, as not being attended with many inconveniencies and bad consequences which arise from full vomiting. Besides, nauseating doses have the advantage of being more certain in their effects, of determin-
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ning more powerfully to the surface, and of proving laxative. In treating of particular emetics, he prefers ipecacoanha for producing full vomiting, and the antimonials for keeping up nausea. He recommends emetic tartar as free from every inconvenience to which the other antimonials are exposed.

Camphor he esteems principally calculated for the cure of maniacal fevers. Castor, saffron, valerian, and contrayerva, he rejects as totally useless in all fevers. Saline draughts may, he thinks, act as diuretics and diaphoretics; but have a tendency to promote putrefaction. He esteems volatile alkali the safest cordial, and most effectual antispasmodic in fevers attended with great debility.

After these observations on particular remedies, our author, in the twenty-first section, treats of a method of putting a stop to fevers at their commencement. For the removal of the spasm, he thinks it necessary to procure a general relaxation of the capillary or extreme vessels, and thereby an universal perspiration. For this purpose, he advises that warm bricks, suddenly immersed in water, and wrapt in flannel, should be applied to the feet and legs; and that tartar emetic, con-
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joined with opium, should be administered in such a manner as to produce vomiting. By this means, he alledges a final solution of fever will often be produced. In those cases where it causes only a remission, it affords a fair opportunity for throwing in the Peruvian bark, which may almost universally be done with safety and benefit. In confirmation of this practice, the author, in the twenty-second section, subjoins a few cases which were successfully terminated by the treatment here proposed.

Dissertatio

VI.

Dissertatio Physica Experimentalis, de Calore Animalium. Auctore J. A. Braunio. Vid. Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae, Tom. XIII. 4to, Petropoli.

THE author of this dissertation is already well known to the learned world, from having produced so great a degree of artificial cold as to congeal quick-silver. In the essay now before us, he sets out with observing, that the extremes of heat and cold are entirely incapable of being measured. He adds, that different bodies in nature vary much with regard to the degree of heat they possess, but that living bodies, independent of their heat, as particles of matter, have an additional heat. This heat, he observes, is much varied in different animals; but, for measuring all the varieties which occur in it, no other instrument is necessary, but a common thermometer.

Our author, after mentioning that the thermometer which he employed, was that of De l' Isle, but that he has reduced all his observations to the correspondent degrees in Fahrenheit's scale, as being more generally known, points
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out several cautions which are necessary for accurate observations ; particularly, that the thermometer be kept applied for a sufficient length of time ; and that, in examining the height to which the mercury has arisen, the eye be kept horizontal to it.

With these precautions, he found that the heat of the human body is about $97\frac{1}{2}$ or 98 degrees of Fahrenheit's thermometer ; and that this heat is nearly the same in all ages and sexes. Upon examining the heat of a calf, both by immersing the thermometer into blood newly drawn, and by introducing it into an aperture of the abdomen, he found it at 104 degrees of Fahrenheit's thermometer. The heat of a pig he found to be the same with the calf, and that of a goat at 101 degrees. A thermometer placed between the thighs of a dog, pointed at 100 or 101 ; to this he thinks two should be added, as the difference betwixt the heat of surface, and that of the viscera, which makes the heat of dogs 102 degrees. From these experiments it appears, that the heat of the human species was less than that of any quadruped which he examined ; but that even the difference between the extremes was not very considerable.

Among

Among birds, he found greater excess above the heat of the human body. The heat in the abdomen of a goose he found to be $107\frac{1}{4}$. It was the same in cocks, hens, ducks, pigeons, peacocks, pheasants, and some others. In smaller birds, he found the heat 111 degrees. From these experiments it appears, that birds differ very little from each other in point of heat; but that all of them considerably exceed the human body.

Upon examining a variety of those fishes which have gills in place of lungs, Mr Braun found, that they had no heat peculiar to themselves, but soon assumed the temperature of the medium in which they were kept, even when immersed in water, of very different degrees of heat. But those fishes which have lungs, he found, possessed nearly the same degree of heat as quadrupeds. To the animals wanting native heat he also refers, frogs, insects, and those animals which sleep during the winter, while they remain in a torpid state.

Having related these observations respecting the heat of men and other animals in a state of health, our author proceeds to observe; that in both it is greatly varied by disease. In fevers, he has in general observed the heat to be at 105,
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6, 7, or 8 degrees in Fahrenheit's thermometer ; and, even in the cold fit of fevers, two or three degrees above the natural standard.

The author next proceeds to inquire what degree of heat and cold men are capable of bearing. Upon this subject, he concludes, that the limits compatible with life are much diversified from custom and other circumstances. He tells us that Richman in his baths could bear the heat at 125 degrees. That the common heat of the Russian baths is $106\frac{1}{2}$, and the greatest 116 degrees ; that dogs, when inclosed in baths, die at different degrees of heat, at 115, 120, and 146 ; that fishes die at 111 degrees, though with that heat frogs still survive. A sparrow, he tells us, died in seven minutes when kept in a heat of 146 degrees. Birds of passage, according to our author, are able to bear extremes of cold ; and insects, extremes both of heat and cold.

Having related these observations, our author concludes the present essay with an inquiry concerning the theory of animal heat. He examines particularly the opinions which suppose it owing to fermentation, electricity, and friction. The two former he rejects as hypothetical and unsatisfactory, and thinks it may with justice be referred to the last.

VIII. *Experiences*

VII.

Experiences Chimiques sur la bile de l'Homme, et des Animaux, par M. Cadet. Vid. Histoire de l'Academie Royale des Sciences, Année 1767. 4to, Paris.

UPON examining human bile, Mr Cadet found, that, without being foetid, it exhaled a nauseous and very disagreeable smell. When exposed in a retort to a moderate fire, it rose in large bubbles, and passed almost entirely into the recipient ; but when, by a very slow evaporation, it was deprived of its air, it furnished, on distillation, a considerable quantity of water, a little volatile alkali, and much animal oil. Spirit of salt poured upon it produced a slight effervescence. This having subsided, the mixture was filtrated and diluted with distilled water ; it then formed a transparent liquor of a beautiful green colour. Upon evaporating this liquor slowly, it yielded a saline pellicle, which being dried, mixed with quicklime, and moistened with water, gave a very pungent smell of volatile alkali. This, in the opinion of
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of Mr Cadet, proves the pellicle to have been a true fal ammoniac, formed by the marine acid which was added to the bile, and a volatile alkali which the bile itself contained.

In prosecuting this inquiry, Mr Cadet was reduced to the necessity of using ox bile, as he could not obtain human bile in sufficient quantity.

Upon mixing the marine acid with twenty-four times its weight of ox bile, a coagulation ensued, and a sensible odour of hepar sulphuris exhaled; but, in the space of a few minutes, this coagulum dissolved, and passed easily through gray paper; but there remained on the paper a whitish gelatinous matter, which had floated on the surface of the fluid. This appeared to be a substance purely animal, and, upon being burnt, gave the same smell as horn would have done. The filtrated liquor was of a beautiful green colour, and gave, upon evaporation, a precipitate resembling pitch. This colour, however, depended upon the continuity of parts; for paper or white wood immersed into it, were tinged of a green colour. This precipitate appeared under the finger like soft wax, and took easily the impression of a seal.

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The liquor from which it was deposited, upon standing, lost its green colour, and assumed a yellow, resembling small beer. To the taste it was very acid, and the sensible qualities of the salt, which had been employed, could easily be distinguished. When poured upon chalk, it produced a very brisk effervescence, from which Mr Cadet concluded that the acid was still free. Upon the addition of new bile, the same phaenomena were produced as at first took place. By a second evaporation of the liquor, a white salt, in the form of small needles, was obtained. Being poured off from any residuum, and again evaporated, a pellicle of brown salt was formed, which had the taste of common salt, decrepitated in the fire; and in every respect appeared to be common salt rendered brown by an oily part which it obstinately retained. This last, Mr Cadet imagines, was formed by the marine acid which he employed, joined to an alkali before existing in the bile. In these experiments, he also discovered chrystals, of the figure of trapezia, resembling sugar of milk.

The next experiments our author made, were with the nitrous acid; but the weather being intensely cold, the bile which was brought him for these experiments was in a frozen state; so that

he was obliged to cut the gall-bladder, in order to get it out. The serum of the bile he found formed into thin flakes of ice, without colour, smell, or taste. The other part seemed to have acquired a consistence thicker only than ordinary bile. In this state, it was put into a glass vessel; spirit of nitre was then poured upon it, which, by agitation, gradually acquired a red colour approaching to violet. But, as the ice melted, it became by degrees of a grey colour; at this Mr Cadet was surprized. He suspected, however, it might arise from the ice being suddenly melted; and, upon repeating the experiment more slowly, the mixture took a beautiful green colour.

This liquor, upon being filtrated, left the same gelatinous substance, upon the paper, as in the former experiment, in which the marine acid had been used. When the nitrous acid was mixed with the bile, a nauseous disagreeable smell arose; not, however, like that of *hepar sulphuris*, which was observed in the former case. The author is of opinion, that the smell in the first experiment might have been owing to a beginning putrescency in the bile; which in this case was prevented, from its being frozen.

This liquor, upon evaporation, gave no resinous precipitate, as in the first experiment. On the

the contrary, there arose to the surface a yellow resinous substance which felt soft to the touch, and adhered to the fingers, if they were not wet. This liquor appeared of a beautiful yellow citron colour. The absence of green Mr Cadet ascribes to a subtile phlogiston, being, in this case, carried off from the bile by the nitrous acid, which he imagines had escaped the marine acid in the first experiment.

This liquor was very acid and very transparent. When evaporated in a glass vessel to one third, it yielded quadrangular crystals. Upon continuing the evaporation, there arose more of the yellow resinous substance; and the liquor, upon being allowed to cool, yielded new quadrangular crystals, and another salt of the form of needles, which adhered strongly to the sides of the vessel.

The quadrangular salt here found, our author alledges, was true quadrangular nitre, formed by the nitrous acid which was added to the bile, and the base of marine salt existing in it. He supposes that the common salt which is contained in our aliment, is decomposed in the body; that the acid joins a volatile alkali there present; and that the base, becoming free, unites itself with the animal oil, to form this species of soap, called bile.

After this, Mr Cadet dried some bile; upon calcining it, he found that it gave a smell like he-

par sulphuris ; and the ashes being washed yielded a salt, perfectly resembling that which is got from the sea plant *Kali*. This salt was saturated with vitriolic acid ; and the mixture, upon crystallization, yielded a fine glauber salt, which our author considers as a farther proof, that the base of common salt is always present in the bile.

From these experiments, Mr Cadet concludes, *1st*, That the bile, having undergone a beginning putrefaction, yields a volatile alkali, which probably does not exist in the animal body, and that this volatile alkali will form, with the marine acid, a kind of sal ammoniac.

2^{dly}, That the mineral acids, at first, coagulate the bile, but afterwards render it sufficiently fluid to pass through grey paper, which it will not naturally do.

3^{dly}, That the needle-like salts, which he found, are produced by the combination of the acids with a calcareous earth present in the bile, and are true selenites. To these our author ascribes the origin of biliary concretions.

4^{thly}, That the chrystals which he observed of the form of trapezia, differ very little from sugar of milk.

And

And, *finally*, That the bile is a true soap, formed of an animal oil, and the alkaline base of sea salt; that it contains also a salt of the nature of milk; and a calcareous earth, which is slightly ferruginous.

The author thinks it probable, that these two last principles, together with the nature of the oil, are the causes of the bitterness and colour which the bile possesses; and which are not found in ordinary soap.

VIII.

An Analysis of the Chalybeate Waters of Bristol, in Pennsylvania, in two Letters from Dr John de Normandie of Bristol, addressed to Dr Thomas Bonde, one of the Vice-Presidents of the American Philosophical Society, held at Philadelphia. Vid. Transactions of the American Philosophical Society. Vol. I. 4to, Philadelphia.

IN these letters the author endeavours to ascertain the principles with which the waters of Bristol in Pennsylvania are impregnated, and to point out the purposes to which they can be applied in the cure of diseases. The first letter contains seven experiments, from which our author concludes, that the water he describes contains, in its natural state, a large proportion of iron dissolved in pure water, by means of an acid. The effects which follow from drinking it, he alledges, are the following. It quickens the pulse; excites an agreeable warmth in the stomach; promotes the

the appetite ; and occasions a flow of spirits and great chearfulness.

The second letter contains nine experiments. From the first five of these, our author draws the same conclusions with regard to the principles of the waters, as before. From the sixth, he concludes, that they contain a small portion of a neutral salt ; from the seventh and eighth, that they are impregnated with sulphur ; and from the ninth, that they tend to an alkaline nature. In this letter, he adds, that they act as a quick diuretic ; that, at first drinking, they generally prove cathartic, and always tinge the excrements black ; that, from the state of the stomach, they sometimes prove emetic ; that, in some cases, they produce a momentary intoxication ; and that they communicate an immediate strength and vigour to the whole system.

From these effects, our author alledges it might reasonably be concluded, that they would be highly beneficial in many diseases. But, as a farther test of their utility, he subjoins ten cases, in which he employed them with advantage.

From these he concludes, that they are a safe and active chalybeate ; and that they may be em-

ployed with particular advantage in old obstinate ulcers; in inveterate rheumatisms; in violent coughs, even when attended with hectic complaints; and in all nervous disorders arising from relaxation.

IX.

A Case of Tetanus and Locked Jaw, cured by amazing quantities of Opium; by Dr Archibald Gloster of St John's, Antigua: communicated to John Morgan, M. D. and F.R.S. &c. and by him laid before the American Philosophical Society. Vide Transactions of the American Philosophical Society. Vol. I. 4to, Philadelphia.

THE subject of this case was a Negro, forty years of age. He was seized with tetanus from imprudent exposure to night-air, after having suffered excessive heat in the day-time. Dr Gloster saw him the second day after the attack, at which time his symptoms were very severe. He immediately had recourse to opium, which
was

was given to the quantity of five grains every third hour, in a powder, conjoined with contrayerva, camphor, and nitre. The dose of the opium was afterwards much increased. It was united with cinnabar and musk, and at last given to the extent of twenty grains every third hour. For the first six days he continued without any relief; after this, his symptoms began gradually to abate, and, in thirteen days longer, were so much diminished, that it was thought unnecessary to continue his medicines. During the course of this disease, besides the powders with opium, Dr Gloster employed baths, fomentations, liniments, clysters, and friction. It is very remarkable that, during the first seventeen days, after this patient began the opium, he took fifteen hundred grains of it without producing any disturbance in his mind, or the least affection of his head; and, during all this time, slept extremely little. The author farther observes, that the opium was, to appearance, good; and, when given in common doses, had the usual effects of opium, in every other instance.

X.

An Account of the Effects of the Stramonium, or Thorn-Apple. By Benjamin Rush, M.D. Professor of Chemistry in the College of Philadelphia. Vide Transactions of the American Philosophical Society. Vol. I. 4to, Philadelphia.

DR RUSH was called to a child, between three and four years of age, which he found affected with a violent fever, delirium, tremors in her limbs, and a general eruption on her skin, accompanied with considerable swelling, itching, and inflammation. After trying some remedies in vain, he had at length reason to suspect that her complaints might proceed from having swallowed some seeds of the thorn-apple. Upon this, he gave her an emetic, which operated briskly, without bringing away any thing but phlegm. A purgative, however, of oleum ricini, and sweet oil, brought away a great number of the seeds. It was repeated for several days successively, with the same effect, and considerable relief; but, from the continuance of the
com-

complaints, he suspected that some seeds were still lodged in the stomach. He had recourse, therefore, to stronger emetics than the first. One of these brought up above eighty seeds, and another above twenty more. Upon this, all her complaints vanished, and in a few days she was perfectly well.

From this case, the author deduces two observations: He is of opinion that it proves, *1st*, That a wonderful connection subsists between the surface of the body and the alimentary canal. *2dly*, That emetics, when given to evacuate the contents of the stomach, although they operate briskly, may not always be attended with the desired effect.

XI. *Disserta-*

XI.

*Dissertatio Medica Inauguralis, de Zinco, ejusque
Florum Usu Medico, Observationibus confirmato.
Auctore Jacobo Hart. 4to, Lugd. Bat.*

IN this dissertation, the author proposes to confirm the medical virtues ascribed to the flowers of zinc, by Dr Gaubius in his *Adversaria*. His observations on this subject are divided into three chapters. In the first of these, he treats of the nature and origin of zinc in general; in the second, of the preparation and properties of its flowers; and, in the third, of their use in medicine, principally when taken internally.

He sets out with observing, that zinc is a semi-metal *sui generis*, endowed with properties sufficient to distinguish it from every other. It has been divided, from the places in which it was found, into the German and Indian. But he observes, that it is also to be met with in many other countries. With regard to the origin of zinc, our author observes, that it is most commonly obtained from the *Lapis Calaminaris*, or *Cadmia*. On this account, Dr Gaubius has af-
fixed

fixed the generic name of *Cadmia* to all the minerals in which zinc is found in its native state. These he has distributed into five species, in his collection of minerals. 1. *Cadmia calciformis*, 2. *Cadmia vitrescens*. 3. *Cadmia micacea*. 4. *Cadmia metallica*. 5. *Cadmia fornacum*. Our author presents us with a short description of each of these, and an account of the places in which they are principally found. He next enumerates the principal properties of zinc as a metal, and the marks by which it may be distinguished from bismuth and antimony, the substances with which it is most apt to be confounded. But, for a particular account of its natural history, he refers his readers to Geoffroy, Hellot, Malouin, Pott, Margraff, and others, who have treated of it at great length.

In the second chapter, our author treats of the flowers of zinc, of the method of preparing them, and of their properties. These flowers, he observes, are the proper metallic earth of the zinc, deprived of its phlogiston. They are obtained in sublimation, either by the addition of other bodies to the zinc, or by the force of fire alone, without any addition. The author describes, from Dr Gaubius, the most simple process
for

for obtaining them in the last of these ways. Care must be taken, he observes, that the fire be not too strong; that free communication be allowed with the external air, but that all quick motion in it be guarded against; and that, in removing the flowers, none of the crude metal be taken up along with them. These flowers, when properly prepared, are whitish coloured, to the touch saponaceous, without either smell or taste, and specifically lighter than zinc itself. In the fire they are fixed, the only influence it exerts upon them being that of changing their colour from a whitish to a yellowish cast. They are dissolved by all acids, but not by water or oil. From these properties, Dr Hart concludes, that the flowers of zinc differ very widely from arsenic, although some have supposed them to be much of the same nature; that they agree more with absorbent earths, but differ from them in still retaining the principle of zinc; and that they are the real earthy principle, which, properly united with phlogiston, constitutes zinc.

This chapter is concluded with some observations on Nihil or Pompholyx, which Dr Hart imagines differs nothing from the flowers of zinc. He advises, however, that, for medical purposes, the
flow-

flowers of zinc should always be employed ; as genuine nihil is rarely to be met with in the shops.

In the third chapter, Dr Hart treats of the use of the flowers of zinc in medicine. He observes, that they have long been used externally, principally for inflammations of the eyes from acrid lymph ; but that they had never been advised internally by any one, except Glauber, till Dr Gaubius discovered them to be the remedy employed by the famous empiric Luddemannus, under the title of *luna fixata*. After this he exhibited them, with success, in the cure of convulsive and spasmodic diseases. Dr Hart imagines, that, in the cure of these diseases, they operate upon two principles, either as absorbents, or as possessing a peculiar specific power ; but, whatever may be their mode of operation, he observes, that there can be no doubt with regard to their antispasmodic powers ; to confirm which, he here subjoins seven cases in which they were used.

The first case Dr Hart relates, is that of a girl seventeen years of age, who, from a fright, was seized with convulsive and spasmodic affections, which were succeeded by tremors of her whole body, particularly the inferior extremities. This
disease,

disease, our author observes, might justly be termed a slight *chorea sancti Viti*. On the sixth day after the attack of this complaint, she was put upon the flowers of zinc, four grains of which were divided into six powders; of these powders, three were directed to be taken every day. From using them, her symptoms were considerably diminished, without any uneasiness being produced. This success encouraged Dr Van Doeveren, who treated the case, to increase the dose. To two drachms of sugar, therefore, finely powdered, he added twelve grains of the flowers of zinc, and had it divided into as many powders. Three of these powders were ordered to be taken every day: By the time they were finished, her complaints were intirely gone.

Some months after, this patient, from a sudden fright, was again seized with her former complaints; but, upon taking four grains of the flowers of zinc, divided into ten powders, they were perfectly removed.

The two next cases fell under the observation of Dr Gaubius, since the publication of his *Adversaria*, and are delivered by our author in the words of Dr Gaubius himself. The *first* is, the case

case of a boy about four years of age, who laboured under a real epilepsy, suspected to be hereditary, as his grandfather was much affected with that disease, and three children of the same family had died of it. After many other remedies had been tried in vain, Dr Gaubius ordered him the flowers of zinc; these he took to the quantity of one grain twice a-day; and, from the use of them, was perfectly recovered.

The *second* case by Dr Gaubius, is that of a man about fifty years of age, who, from a high degree of vexation, was thrown into such violent convulsions, as to be threatned with immediate suffocation. Upon a vein being opened, and other remedies administered, the fit, at that time, went off; but, in about two weeks after, it returned with as great violence as before, and attacked him even twice in one night. To this patient, a grain of the flowers of zinc was given every two hours; after this, he had no return of his fits. Dr Gaubius farther observes, that he has used the flowers of zinc, in cases of chincough, of hysteric hiccough, and of the spasmus cynicus. He adds, that they frequently did more than any

other medicine ; but that they were by no means successful in every case.

The *fourth* case which is here related, is one which was treated by our author himself. A woman, thirty-two years of age, was, from a fright, seized with convulsions and spasms attacking different parts of her body. After trying other remedies in vain, recourse was had to the flowers of zinc. Of this remedy she took five grains a-day, in doses of one grain each. From the time she began the medicine, her convulsions gradually diminished, and in four days ceased entirely. Still, however, she was affected with headach, though less violent than before ; and, upon continuing the medicine a few days longer, this also entirely ceased.

The three last cases here narrated were communicated to our author, by Dr Stolte.

To a girl of twelve years of age, who laboured under a convulsive disease, greatly resembling epilepsy, a grain of the flowers of zinc was ordered to be given every morning. After the second dose, her spasms were considerably decreased, and, after the fourth, were entirely gone.

To

To a girl, seventeen years of age, labouring under a similar disorder, the zinc was administered in the same doses. After the second dose, her complaints were a good deal abated ; and, by the time she had continued it twenty mornings, they intirely ceased.

A boy fifteen years of age, from a sudden fright, was seized with most direful affections of the nervous system. Fear, anger, weeping, laughing, singing, hiccups, barking, tremblings, convulsions, and tetanus followed each other in quick succession. After other remedies had been tried in vain, Dr Stolte prescribed the flowers of zinc. The boy took a grain of this every day for two months with remarkable relief, although it did not produce a perfect cure. After finishing the narration of these cases, our author concludes with observing, that if, from more numerous trials, the utility of this medicine be still farther confirmed by others, it will not only afford him great pleasure, but be an inducement to him hereafter to work upon the same subject.

XI.

Bibliotheca Medicinæ et Historiæ Naturalis, auctore Alberto von Haller, in supremo senatu reipublicæ Bernensis ducentum-viro, &c. &c. 4to, Tom. 1. 2. London.

WE are here presented with the first part of a large and what will unquestionably be a useful work. Dr Haller intends to give an historical account of all the books hitherto written on the different branches of medicine and natural history; and to offer his opinion with regard to their merit. About twenty years ago, he published an edition of Boerhaave's method of studying physic; to which he added very large notes. These notes were, in some respects, similar to the work which he has now undertaken. There, however, he laboured under a great disadvantage, from being obliged to follow the plan of another writer. In this work, the order which he proposes to follow, is, *first*, to give an account of the books written on botany; next on anatomy; then on surgery; afterwards on the practice of physic; and,

and, lastly, on those branches of philosophy most intimately connected with medicine.

Of this work two volumes only are yet published. In these, the author completes his account of the books on botany. Dr Haller has classed the botanic writers according to the periods at which they wrote. He has divided this part into ten books, eight of which are in the first volume, and two in the second. Each book contains an account of the writings of a class of botanists. The botanists, whose writings are treated of in the first book, Dr Haller terms, the *Auctores Graeci*. Under this title are comprehended all the botanists, from the earliest period of the science, to the days of Nicolaus Alexandrinus. This book, therefore, contains an account of the writings of all the ancient eminent botanists, both Greek and Roman. An account of the writings of the Arabian botanists is the subject of the second book. Few authors of note are comprehended under this period. The general character which Dr Haller gives of them is, that they did little more than copy Dioscorides, whom they never understood. He remarks, that they were entirely ignorant of the Latin authors, and that, although the works of Pliny were translated into

Arabian, he has never been able to find him cited by any of them.

Of still less eminence are the authors whose writings are treated of in the second book. These Dr Haller terms the *Arabistae*, as being mere compilers from the former class. With the fall of the Roman empire in the West, the arts and sciences were also ruined. The only remains of learning were preserved among the monks, who, from their laws and institutions, were so shut up in cloysters, that they had no opportunity of consulting nature. Hence, it is not surprising that they did little more than copy the Arabians and Galen.

In the fifteenth century, sciences in general began to be revived in Europe. With this period Dr Haller begins that class of botanists whom he terms the *Inflauratores*; under which title he includes all the botanists till about the middle of the sixteenth century. Of their writings we have an account in the fourth book. The next class of botanic writers Dr Haller terms the *Inventores*. To this class are referred those botanists who flourished from the middle of the sixteenth, till about the beginning of the seventeenth century. The authors of whose writings we have an account

count in the sixth book, are termed the *Collectores*, under which title are comprehended the botanists for a period of about thirty years after the close of the sixteenth century. At the head of this list stand the *Bauhins*, whose merit, according to our author, well intitles them to begin a period in botany. After this, Dr Haller distinguishes his periods by the names of *eminent botanists*, and, in the seventh book, gives us an account of the writings in botany which were published from the period of the Bauhins, to the time of Ray, whose first work appeared in the year 1660. The eighth book, which concludes the first volume, contains an account of the botanic writing, from the first publication by Ray, till the time of Tournefort. During the former period, botany had been greatly retarded by the wars in which Europe was engaged, and the poverty to which it was reduced. During this period, from the restoration of peace, the establishment of academies and of public gardens, its progress was great and rapid.

Dr Haller begins his ninth book with an account of the writings of Tournefort, whose first attempts in the botanic way appeared in the *Memoirs of the Royal Academy of Sciences at Paris*,

in the year 1692. In this book, he gives an account of all the botanical publications, from the period at which it commences, till the time of Linnaeus, who first published on botany in the year 1732. The writings of those botanists who published from that date, till the year 1772, are the subject of the tenth book, which concludes the *Bibliotheca Botanica*.

From what has already appeared of this work, it must, when completed, be highly useful, as it will afford a full view of all the assistance which can be had in studying any medical subject. From its nature, however, it does not admit of being abridged; and it might be supposed, scarcely to fall under the plan of a work, the purpose of which is, to collect discoveries and improvements. But, even the short account here given of it may afford some satisfaction to those who have had no opportunity of seeing the work itself.

SEC.

S E C T. II.

Medical Observations.



I.

An uncommon Tumour on the Thigh, successfully extirpated, by Dr Isaac Hall, Physician at Petersburg in Virginia, communicated to Dr Duncan.

A Woman aged 46, about seven months ago, first discovered a small hard tumour below the skin on the outside of her right thigh. It increased gradually, till it felt to be about the size of a pigeon's egg. Its growth then seemed to stop for several weeks. During this time it occasioned no pain, nor any kind of uneasiness, and appeared to be quite detached from the muscles and the common integuments. While it was in this state, it unfortunately received a blow, which was followed by considerable pain shooting

shooting upwards and downwards along the thigh, and by some degree of inflammation. After this it increased quickly in size, and seemed to be entirely fixed in its place. The skin over it grew red and tense, and the pain became daily more intolerable. Some honest neighbours, imagining it to be a common boil, advised, that such substances should be applied to it as they thought would bring it soon to suppuration. Accordingly, turpentine, united with some other ingredients, was used for this purpose. This application had soon the desired effect; the skin over the tumour was immediately broken. But, instead of well concocted pus in a large quantity, nothing was discharged but a little thin foetid ichor. And, from the bottom of the ulcer thus formed, a substance resembling fungous flesh, but in its colour rather more black, began to sprout up. This grew very fast, and every thing which the knowledge of common people could suggest with a view of checking it, upon trial, proved ineffectual. In about five months it increased to such a degree, that the excrescence which could be seen raised above the skin would, it was imagined, have weighed four or five pounds. Till this time, she had enjoyed tolerable health; her menses, and
other

other evacuations, continuing regular as usual. But, the state of her complaint now confining her closely to the house, she became somewhat low-spirited. This was followed by slight paroxysms of a hectic fever; loss of appetite; want of rest; and other symptoms threatening danger. All her relations began then to think her in imminent hazard. As no medical assistance was at hand, they applied to a practitioner who lived at a considerable distance. He, at that time, happened to be so much indisposed, that he could not go to see her; but he desired that she might be sent to him, which was accordingly done. Upon examining the size of the excrescence, and considering its nature, he assured her relations, that he durst not attempt extirpating it, as he was convinced a hemorrhage would necessarily follow the operation, which she could not survive. She was therefore sent home again, with the melancholy prospect of certain death, at the end of a painful, and, perhaps, tedious illness.

While she was in this situation, I was sent for to give my opinion concerning her complaint. When I examined the excrescence, I did not apprehend so great danger from taking it off as had
been

been represented. I was informed that an attempt had been made to remove it by a ligature; but that it gave her such excruciating pain as she was unable to endure. I therefore dropt all hopes of succeeding by that means, and resolved to trust to the knife alone. When I declared this to be my opinion, it at the same time brought me under the necessity of performing the operation. It was a piece of plain dissection, and the hemorrhage by no means considerable. I found it necessary to stop two blood-vessels only, by means of the needle. When the tumour was entirely removed, the wound upon the thigh was about five inches broad, and of an oval figure. The tumour itself was similar in appearance to the lungs, infarcted with blood, in the state in which they may be seen on dissection in peripneumonic cases. It extended over a much larger compass than its base, and bore a faint resemblance to a mushroom; but its surface and sides were very uneven and irregular. I dressed the wound with dry lint, and did not remove the dressings for two days. When I then examined it, I found that two protuberances, each about the size of a small nut, had grown near half an inch above the surface of the wound. This much discouraged me, as it threatned a renewal of the excre-

excreſcence. I applied the merc. præcip. rub. to theſe protuberances; but it had no effect in reducing them. I had then recourſe to burnt alum; but the pain it occaſioned was ſo great, that ſhe was unable to endure it. But, as it ſeemed to have the deſired effect, I was unwilling to relinquish its uſe. I therefore delayed the dreſſings till bed-time; and, when I applied the alum, I gave her, at the ſame time, an opiate in a full doſe. By this means ſhe was ſenſible of little pain, and commonly ſlept well; while, at the ſame time, the alum had the deſired effect in leſſening the protuberances. When I left her, they were much diminifhed, though not entirely gone. But, I am ſince informed, that they are ſcarce obſervable, and that the wound is healing faſt. Before the operation, I ordered her ſome Peruvian bark, which ſhe continued to take for ſome time after it. Her hectic ſymptoms are now entirely gone; and, excepting the ſmall part of the wound in her thigh, which ſtill remains to be ſkinned over, ſhe is, in every reſpect, in perfect health.

The

II.

The Case of a Woman who spit up, from her lungs, a great Quantity of pure Bile, by the late Dr Thomas Simson, Professor of Medicine in the University of St Andrew's, communicated to Dr Monro.

AN ulcer, either in the lungs, liver, or diaphragm, is always attended with great danger. In what state then must that person be, who has all the three affected at the same time, and in the worst manner? The following case, however, affords an example of a person thus affected being perfectly recovered.

In the beginning of June 1756, Margaret Falconer, a woman about thirty years of age, applied for my advice. Six years before that, when engaged in hard work, she was seized with a violent pain in her right side, about the middle of the false ribs. This was attended with a severe cough, of which she had seldom been free since that time. Not long before I was consulted, upon riding several miles on horseback against the wind, she

she was seized with a fit of coughing particularly severe, and expectorated some pieces of knotty, coagulated, yellow coloured matter, resembling the yolk of an egg hard roasted. After this, her pain and breathlessness were for some time considerably relieved. A few days before, I was sent for, upon some violent motion, matter similar to the former was again expectorated. When I first visited her, she was constantly discharging by her mouth a great quantity of pure bile. This she spit up with very little cough, and so easily, that I had some doubt whether it came from the lungs or stomach; I was particularly inclined to the latter opinion, from her having some tendency to vomit. To determine this, I ordered her a dose of Glauber's salt; but there was no appearance of bile in the stools she had from it, although, at this time, she was discharging it in mouthfuls of a deep yellow colour, and of a strong bitter taste. This discharge was so constant, that she could sleep but little in the night. I then ordered her to be bound as tight round the region of the liver as she could easily bear, and to drink plentifully every day of Hartfell-spaw-water. This course she continued for three weeks, without any relief, discharging every day not less than three pounds
of

of bile. In this situation, I put her upon Peruvian bark. In eight days, this had such an effect upon her spitting, that she did not discharge above eight ounces in the course of twenty-four hours. But the matter which she spit up still continued to be ropery, bitter, frothy, and of a deep yellow colour. On this diminution of the discharge, I ordered her to drink salt-water; which, after three days, forced a purging of bilious foetid watery stuff. This purging continued for some days, although she drank no more of the water. By the time it ceased, she was almost entirely free both of spitting and cough. After this, she slept well in the night, and gradually recovered her former strength.

From considering the above case, I am inclined to believe, that, in this woman, the liver, diaphragm, and lungs were coherent and ulcerated. The Peruvian bark probably contributed to straiten the passage between the lungs and liver, in which the greatest ulceration seemed to have taken place. By this means it gave an opportunity to the sea-water to force a passage for the bile into the intestines, by the common duct, which had been obstructed.

III.

A Fracture of the Skull, with the loss of part of the Substance of the Brain, cured by Dr Robert Maclagan, at Coaltulach; communicated to Dr Hope.

LAST summer, in the middle of June, I was called to see a boy about ten years of age, who had been gored in the head by a bull. One of the bull's horns had entered about half an inch below the upper part of the right temporal bone, and raised a piece of the skull, about two inches in length, and an inch in breadth, which consisted of part of the parietal and temporal bones of the right side. The dura and pia mater were both torn. This I easily discovered, although the integuments were swelled, by introducing a probe, the end of which brought out part of the substance of the brain. Several splinters of the skull were sticking in the brain. These I extracted by a pair of forceps. Another part of the skull was raised upon one side, but united at the other. This I attempted to reduce to its natural position, but could not wholly effect it. I did not see him

VOL. I.

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again

again till the fourth day after the accident happened. There was then some protrusion of the brain at the wound. This protrusion increased from the fourth till the fourteenth day. At that time it had risen to the height of an inch, or rather more, above the skull, and was so extended and spread out in all directions, as to be about the size of a goose egg.

In the treatment of this case, my chief aims were to moderate the fever, and to keep the different excretions from the body in their natural state. This I attempted by bleeding, purgatives, and cooling regimen. I at the same time applied externally spirit of mindereri to abate the inflammation and swelling, which were become pretty general upon the right side of the head, before my arrival. The substance of the brain I dressed with dry lint. From prosecuting this course, it soon began to skin over at the edges; and, in proportion as the skin approached, that part of the brain which had protruded, suppurated, and dropt off in pretty large pieces. In two months it was completely skinned over, and the boy perfectly well. He still continues so; only there is a small protuberance on the cranium, at that part where I could not reduce the bone to its natural situation.

S E C T.

S E C T. III.

Medical News



SOME months ago, Mr Hewson of London read a lecture, in which he explained some physiological discoveries, which he imagines he has made, respecting the formation of the red globules of the blood, the use of the spleen, thymus, lymphatic glands, and lymphatic vessels. The following account, although probably in many respects imperfect, may give some idea of his opinion.

With regard to the structure of the lymphatic glands, he alledges, that, although they have the appearance of being cellular, yet all of them consist principally, and many of them entirely, of convoluted lymphatic vessels. From these glands, upon the slightest incision, he observes, that a whitish coloured fluid, containing a number of solid particles, may be squeezed out.

The thymus, he alledges, is a lymphatic gland, supplied with a great number of arteries, veins, lymphatics, and nerves; and, in its structure, ve-

ry similar to the lymphatic glands. It has also a cellular texture, from which, upon incision, a whitish coloured fluid may be squeezed out. As it disappears in adults, he concludes, that then it either becomes unnecessary, or that some other organ supplies its place.

As the spleen is very generally found in the living system, he infers, that it is an organ of great importance. From its being taken out without inconvenience, he supposes that something else in the system is capable of performing its functions. He rejects the supposition of its being subservient to the liver, for the formation of bile, because fluids of greater consequence in the oeconomy are prepared by one organ. Its structure, he observes, is very analogous to that of the lymphatic glands ; it has some nerves; it has a great number of blood-vessels, but it abounds particularly with lymphatics. From the tenderness of its vessels, a mistaken appearance of cells has been formed. It has cells, however, which belong entirely to the lymphatic system, and which can be detected only by injecting the lymphatics, contrary to the direction of their course. From the similarity in the structure of the spleen and thymus, he concludes, that the offices for which they are intended are connected.

He

He observes, that the figure of the red globules of the blood in different animals, is a good deal varied. He asserts, that those of the human system are round and flat, resembling the slices of a cucumber; that their edges are formed of a solid matter; and that the middle space is occupied by a bladder.

He rejects the opinion, that the red globules are formed either by the action of the blood-vessels, or by any kind of fermentation.

He alledges, that the solid particles found in the thymus and lymphatic glands must enter the blood; as there is no other outlet for them, and as they are found in the lymphatic vessels. But, as they disappear in the blood; as it is unreasonable to suppose they are annihilated there; and, as in many respects they resemble the solid part of the red globules, he concludes they go to the formation of these. Upon tying a lymphatic vessel, he asserts, that a collection of red globules will be found near the ligature; and that they are particularly found in great abundance in those lymphatics coming from the spleen. Hence, says he, if it can be concluded, that the liver secretes bile; that the kidneys secrete urine; or, that the testicles secrete semen; because these fluids are found in

their excretory ducts, there is the same reason for imagining that the spleen secretes red globules, since red globules are found in its only excretory ducts, the lymphatic vessels.

From all this, he supposes that the thymus and lymphatic glands concur in the formation of the solid part of the red globules; and that the spleen adds the vesicle to these solid parts. He concludes then, that the formation of red globules is the province of the lymphatic system; that the thymus, lymphatic glands, and spleen, are all appendages of this system; and that, when these are either obliterated, as is the case with the thymus in adults; diseased, as happens, with the lymphatic glands in scrophula; or wanting, as when the spleen is cut out, the lymphatic vessels are able to supply the functions of any one of them, or of the whole.

A quantity of the flowers of zinc, carefully prepared by Dr Black, has been placed in the hands of Mr Douglas a druggist in Edinburgh, that such practitioners as chused to try them, might easily obtain them of a good quality. They have been tried in one epileptic case, without any good effect. In another they produced considerable relief.

But

But the most remarkable instance of benefit obtained from them in this country, which we have heard is, in a case at present under the care of Mr Bell surgeon in Edinburgh. This patient had been, for many years, afflicted with an obstinate epilepsy, which induced a high degree of stupidity and idiotism; although, before the attack of this disease, his mental faculties were by no means deficient. From the use of the flowers of zinc, his fits are now become much less frequent, and less violent than before, and he has recovered the full exercise of his senses. He at present takes ten grains of the flowers of zinc three times a-day, without their producing any sensible operation, or his feeling any inconvenience.

We are informed by Dr Gahn, that the vitriolic acid has of late been much, and successfully employed in some places of Germany, in the cure of the itch. It was first used for this purpose in the Prussian army, in the year 1756, by Dr Cothenius, first physician in Prussia. This practice was afterwards described in a treatise intitled, *Dissertatio de Olei Vitrioli Ufu in quibusdam Scabiei speciebus*, written by Dr Helmich, and printed at Hale in 1762. It was also described by Dr Baldinger, in his treatise on the diseases of the army, which

is written in the German language. Dr Schroeder, professor of physic at Gottingen, informed Dr Gahn, that he had frequently employed it in practice, and that he never failed to cure the itch by means of it, in fourteen days at farthest. Dr Schroeder esteemed this cure most proper in plethoric subjects, and in those cases in which the itch was combined with soreness and inflammation of the parts, but less proper in cacochymic or cachectic habits, where he thought too much acid would be hurtful. It is alledged to cure equally well, both in the scabies sicca and humida. If it be given to nurses, it is said that it will cure both them and the children. The dose in which it is given must be regulated by the condition of the patient; the formula employed may be varied according to the fancy and taste of the physician. Dr Schroeder used the following prescription: *R. Ol. vitriol. puris. dr. i. Aq. font. dr. v. Post effervescentiam, adde Syrup. rub. Id. dr. ii. Mis.* The dose of this mixture was from one to two drams, twice or thrice a day, in a glass of pure water. Dr Gahn has himself ordered it in one case, in which its use was attended with success, and he thinks that, if necessary, the dose might be much encreased without any inconvenience.

A nume-

A numerous and respectable society for the advancement of useful knowledge in general, but especially such branches of it as are immediately connected with the interest of the British colonies, has lately been instituted in America. In the first volume of their transactions, which is the only one yet published, is contained a list of the members of this society, and of the officers for the year 1771. Dr Franklin was then president; Dr Smith, Mr Rittenhouse, Mr Ewing, and Mr Jones were secretaries; and Dr Rush, Dr Kuhn, and Dr Shippen, were curators.

At the last annual election of the Royal Society, in London, Sir John Pringle, physician to her Majesty, was chosen President.

The college of physicians, at this place, have lately lost three of their honorary fellows, Baron Van Swieten, Mr Senac, and Dr Mounsey. At their quarterly meeting on the third of November 1772, they unanimously agreed, that diplomas for honorary fellowships should be presented to Baron Haller of Switzerland, and Sir Charles Linnæus of Sweden.

A new edition of the pharmacopoeia Edinburgensis has been long in agitation; but the publication was unavoidably retarded by the death of
some

some members of the committee to whom the revival of it was intrusted. The president, for the time being, with Dr Cullen and Dr Black, have since been the committee for that purpose. A transcript of the pharmacopoeia, prepared by them, has now circulated through the fellows of the college. It is again put into the hands of the committee, together with the remarks made upon it by the different members, and probably will soon be ready for the press.

A new arrangement of birds, supposed to be the work of Mr Pennant, is at present in the press at Edinburgh.

S E C T.

S E C T. IV.

A List of new Books.



THE philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious, in many considerable parts of the world. Vol. LXI. for the year 1771, 4to, London.

Dictionnaire mineralogique et hydrologique de la France, 4 vols, 8vo, Paris.

Histoire naturelle des vegetaux, confideres relativement aux differens usages qui' on en peut tirer pour la medicine et l' economie domestique, 10 vols, 12mo, Paris.

Traite de rachitis, ou l'art de redresser les enfans contrefaits, par M. Vacher de la Faitrie, M.D. 8vo, Paris.

Elixir Americain, ou le salut des dames par rapport a leur maladies particuliers, par M. de Courcelle, 12mo, Paris.

Pharmacopoeia Danica, regia auctoritate, a collegio medico Hafniensi conscripta. Copenhagen.
Funda-

Fundamenta entomologiae, or an introduction to the knowledge of insects. Being a translation of the fundamenta entomologiae of Linnaeus, farther illustrated with copper-plates and additions, by W. Curtis, apothecary, 8vo, London.

La médecine pratique rendue plus simple, plus sûre, et plus méthodique, par M. le Camus, Docteur en médecine de la faculté de Paris, 2 vols, 12mo, Paris.

Dissertation sur la fièvre miliare, par M. Planchon, 8vo, Tournai.

Index fossilium, quae collegit, et in classes ac ordines disposuit, I. Eng. 8vo, Prague.

Nervorum cervicalium anatome, a J. Bang, Copenhagen.

Elements of the practice of physic, by John Gregory, M. D. professor of the practice of physic in the university of Edinburgh, 8vo, Edinburgh.

Cases in surgery, particularly of cancers and disorders of the head from external violence, with observations. To which is added an account of the Sibbens, by James Hill surgeon in Dumfries, 8vo, Edinburgh.

Elements of therapeutics, or first principles of the practice of physic, by Andrew Duncan,
M. D.

M. D. fellow of the royal college of physicians Edinburgh, second edition, 2 vols, 8vo, Edinburgh.

The principles, elements, or primary particles of bodies inquired into, by John Gibson, M. D. 8vo, London.

Directions and observations relative to food, exercise, and sleep, 8vo, London.

A treatise on the management of pregnant and lying-in women, together with some new directions concerning the delivery of the child and placenta, in natural births, by Charles White, F. R. S. and surgeon to the Manchester infirmary, 8vo, London.

Code de médecine militaire, pour le service de terre ; en trois parties. La 1. de la sante de gens de guerre ; la 2. des hospitaux militaires ; et la 3. des maladies des gens de guerre. Par M. Colombier, Docteur Regent de la faculté de médecine en université de Paris, &c. 5 vols, 12mo, Paris.

De la sobriété et des ses avantages, ou les vrai moyen de se conserver dans une sante parfaite jusqu' a l'age le plus avancé. Traduction nouvelle de Lessius et de Cornaro, par M. de L. B. 12mo, Paris.

De-

Descriptio anatomica nervorum cardiacorum, sectio prima, de nervo intercostali, dextri imprimis lateris. Auctore Ernesti Neubauer, M. D. Francfort.

Domestic medicine, or a treatise on the cure and prevention of diseases, by regimen and simple medicines, by William Buchan, M. D. fellow of the royal college of physicians, Edinburgh, 8vo, London.

Practical observations on the small-pox, apoplexy, and dropsy, by S. A. D. Tiffot, M. D. &c. 8vo, London.

Observations on the nature, cause, and cure of fevers, by William Grant, M. D. 2d edition, 2 vols, 8vo, London.

Practical observations on the child-bed fever, also on the nature and treatment of uterine hæmorrhages, convulsions, and such other acute diseases as are most fatal to women during the state of pregnancy, by John Leake, M. D. member of the college of physicians, London, and physician to the Westminster-lying-in hospital, 8vo, London.

Chirur-

Chirurgical observations and cases, by William Bromfield, surgeon to her Majesty, and to St George's hospital, 2 vols, 8vo, London.

Plain and easy directions for the use of Harrogate-waters: Adapted to the meanest capacity; and principally intended for the use of all who attend there, by William Alexander, M. D. 8vo, Edinburgh.

Lectures on the duties and qualifications of a physician, by John Gregory, M. D. F. R. S. physician to his Majesty, and professor of medicine in the university of Edinburgh, 8vo, London.

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M E D I C A L
A N D
P H I L O S O P H I C A L
C O M M E N T A R I E S.

By a SOCIETY in EDINBURGH.

La Nature est juste envers les Hommes : elle les recompense de leur
peines ; elle les rend laborieux, parce qu'a de plus grands travaux
elle attache de plus grandes recompenses. MONTESQUIEU.

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M,DCC,LXXIII.

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M E D I C A L C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

Elements of the Practice of Physic, by John Gregory, M. D. Professor of the Practice of Physic in the University of Edinburgh. 8vo, Edinburgh.

WE are informed, in an advertisement prefixed to these elements, that the author proposed to have comprehended in them, all those diseases of which he usually treated in his lectures on the practice of physic. But, not having leisure to finish the whole, he was obliged to stop at the end of those diseases commonly reckoned febrile.

The public had once reason to expect that they would soon have been favoured with the remaining part of this syllabus. But, from the sudden and universally regretted death of the author, this expectation is now at an end. We shall

therefore present our readers with the general principles here laid down respecting the cure of the different febrile diseases.

After some observations on the arrangement of diseases, our author sets out with treating of febrile diseases in general. He alledges they may be distinguished into intermittent; continued; remittent; exanthematous; and phlegmasiae, or those attended with topical inflammation. According to Dr Gregory, the general causes of fevers are, Miasmata; Contagion; Errors in diet; Violent emotions of the mind; Suppression of usual evacuations; Improper applications of heat and cold; A certain state of the air; Stimuli from external applications or injuries; And internal stimuli from inflammation, suppuration, &c.

He alledges, that the symptoms of febrile diseases are so different, that it is impossible to assign any proximate cause which will admit of application to practice.

What he points out as the most general indications in fevers are, to remove plethora; to diminish the increased impetus of the blood's motion; to abate heat; to obviate thirst; to produce an equable determination of the blood and
nervous

nervous power ; to promote secretions when obstructed ; to prevent or obviate the consequences of topical congestion ; to support the vis vitae, and stimulate the nervous system when torpid ; to obviate putrescency ; to remove occasional causes ; and to relieve particular symptoms.

Intermittent fevers, our author observes, have been cured by a variety of remedies of different and opposite natures. The paroxysm, he alleges, may be prevented, by the application of such things, before its approach, as excite a great commotion in the system ; by mild sedatives, antispasmodics, and diaphoretics ; by remedies which produce no sensible effect, as bitters, astringents, and Peruvian bark. The prevention of paroxysms depends on avoiding occasional causes ; and on bracing and invigorating the system.

Our author's indications of cure in continued fevers are, to remove plethora ; to diminish the increased action of the heart and arteries ; to take off spasm, and promote the natural secretions, especially by the skin ; and to prevent or remove topical congestion, particularly in the head.

The indications he lays down in the nervous fever are, to promote a gentle diaphoresis ; to keep

the belly open ; and to remove any disorder of the stomach ; to support the vis vitae ; to remove spasmodic symptoms ; and to take off increased determination to the head, or congestion in it.

He observes, that, in putrid fever, the indications of cure are different in different periods of the disease. His general indications are, to obviate the effects of plethora, and violent heat ; to remove occasional causes ; to procure gentle evacuations of the primae viae, and promote perspiration ; to support the vis vitae ; to obviate putrescency ; and to palliate particular symptoms. The prophylaxis, he alledges, consists in avoiding miasmata, contagion, foul air, and dirtiness ; in avoiding whatever weakens the system, and depresses the nervous power ; and in the use of antiseptics.

The indications laid down in remittent fevers are, to promote an intermission ; to stop the return of paroxysms ; to obviate inflammatory or putrid diathesis ; to avoid and remove remote causes ; and to palliate the violence of particular symptoms.

The cure of hectic fever, he observes, depends upon the removal of the primary disease.

In

In small-pox, according to our author, the view of the physician should be, to render them as mild as possible, by moderating the symptoms in the successive stages of the disease. And, on the accession of the secondary fever, the indications are, to mitigate the febrile symptoms, and to take off the determination to the head, throat, and breast.

The indications which he proposes in the measles, are, to moderate and assist the efforts of nature in the eruption; to obviate the catarrhal and peripneumonic symptoms; to remove the disorders consequent on the disease; and to obviate the symptoms of putrid or nervous fever when complicated with it.

With regard to the cure of the miliary fever, he alledges, it is impossible to say any thing positive, as these eruptions are symptoms of fevers of very opposite kinds, and requiring opposite management; and as they are so generally the mere effects of hot regimen, and profuse sweats.

Our author considers the erysipelatous fever as a disease which, for the most part, runs its course without any danger. But, when it attacks the face, he advises repeated, general, and topical bleeding,

bleeding, with cooling laxatives, and those medicines, in general, which tend to take off determination to the head. When, however, the eruption seems critical, all evacuations are, he thinks, improper.

The plague, Dr Gregory alledges, is a nervous fever, highly contagious. This contagion is specific. The cure, he tells us, has been attempted without any regard to nature's plan, by large bleedings in the beginning, by exciting a profuse sweat, and supporting it for a long time. The prevention depends on avoiding communication with infected people; destroying or dissipating the contagious matter adhering to bodies; and rendering the body unsusceptible of the contagion.

The indications which he lays down for the resolution of inflammation are, to obviate remote causes; to remove general inflammatory fever; to remove topical affection, increased action of the vessels, topical congestion, and spasm.

When inflammation terminates in suppuration, he proposes that a discharge of laudable pus should be promoted, by external applications of various kinds, suited to the nature of the part; by internal remedies, and such regimen as tends to remove
any

any general indisposition in the habit, which prevented the generation of good pus.

In gangrene, the author's indications of cure are, to remove occasional causes; to prevent the morbid matter from affecting the system; and to promote suppuration.

The indications of cure which were formerly laid down in inflammatory fever are, he alledges, applicable to phrenitis. But he observes, that it is farther necessary to take off the attention from whatever is disagreeable; to introduce new and pleasing ideas; and to soothe the mind by every possible art.

Our author is of opinion, that ophthalmia is merely a topical affection, but attended with great tension and pain; and that the cure depends upon topical bleeding, cathartics, avoiding irritation, blisters and issues, emollient applications, anodynes, keeping up a free perspiration, and obviating remote causes. But, when the inflammation seems chiefly to proceed from relaxation, tonics, cold bathing, gently stimulating and astringent applications, and errhines, are to be employed.

In the inflammatory angina, the indications of cure which he lays down are, to obviate remote causes,

causes, to promote resolution, to promote a favourable termination by suppuration, to supply the want of food and diluting liquids, and to prevent strangulation. But in gangrenous angina, the indications of cure are the same as in putrid fever. The principal remedies he advises are, Peruvian bark, wine, antiseptics, injections into the throat, and steams of vinegar and myrrh directed into the fauces.

His indications in the catarrhal fever are, to take off inflammatory diathesis, and topical inflammation; to promote secretion from the mucous membrane; to correct the acrimony of the discharged fluid; and to restore perspiration, and the determination of blood to the surface.

The indications he lays down in whooping cough are, to moderate the symptoms and prevent immediate danger in the paroxysm; and to shorten the duration of the disease.

He considers pleurisy and peripneumony together, as they are in general combined, as they proceed from the same causes, and as the method of cure in both is the same. He alleges, that the same indications are to be followed here as in inflammatory fever; and farther proposes, to take
off

off determination to the lungs, to promote critical evacuation or metastasis; but particularly to promote expectoration, and to relieve particular symptoms.

In phthisis pulmonalis, the indications of cure which he proposes are, to remove inflammatory diathesis; to take off determination to the lungs; and to mitigate the severity of particular symptoms.

In hepatitis, he proposes the same general plan of cure as in pleurisy.

He observes, that the same general indications of cure take place in gastritis, as in other inflammations. But, if it has arisen from acrid ingesta, or acrid contents of the stomach, the indications are, to expel them by emetics or laxatives, and to correct the poison by specific antidotes.

Besides the cure pointed out for inflammatory fever, he proposes, in enteritis, to obviate remote causes, especially costiveness; and to palliate particular symptoms.

The general indications of cure, in nephritis, are the same as in other phlegmasiae.

His

His indications, in acute rheumatism, are, to remove the general inflammatory fever ; and to relieve the topical affection. In chronic rheumatism, besides relieving the topical affection, he proposes to promote diaphoresis by medicines that may stimulate more than would be proper in acute rheumatism.

The last disease which our author considers, is gout. In the cure of this, two cases, he observes, are to be carefully distinguished. The *first*, where the constitution is sound, the fits regular, and an inflammatory diathesis present. The *second*, where the constitution is debilitated, the fits irregular, and alternating with affections of the system. In the *first* of these cases, he proposes, that, during the intervals, care should be taken to avoid all occasional causes ; and that, during the paroxysm, we should endeavour to mitigate the pain, without repelling the gout. This he advises to be done by general and topical bleeding ; by laxatives and diaphoretics that do not heat or stimulate ; by light diet and cool regimen ; by external anodyne applications ; and by the cautious use of anodynes internally, in the decline of the paroxysm.

In the *second* case, he proposes, in the intervals of the fits, to support the vis vitæ ; to promote an
equal

equal distribution of the blood, especially to the extremities; to keep up free perspiration; to obviate debility, indigestion, and acidity in the stomach; and to avoid all sudden changes of regimen. During the paroxysm, he advises us, to use a cordial regimen; to give particular attention to the state of the stomach and bowels; and to employ such external applications as tend to invite the gout to the extremities, and to detain it there.

II.

II.

Cases in Surgery, particularly of Cancers and Disorders of the Head from external Violence; with Observations. To which is added an account of the Sibbens, by James Hill Surgeon in Dumfries. 8vo, Edinburgh.

THE treatise now before us is divided into two chapters; in the first of these, Mr Hill treats of cancers. Surgeons in general have been deterred from having recourse to extirpation in schirrous and cancerous cases, from an opinion that these diseases could not, in that way, be so effectually removed as to prevent their return. Mr Hill has the satisfaction of assuring his readers, that this opinion is, by no means, well founded; having, in the course of thirty years practice, extirpated no less than eighty eight genuine cancers, all of which, four excepted, were ulcerated. Of these patients, two only did not recover from the operation.

In April 1764, Mr Hill made a survey of the cases which had been under his care previous to
that

that date. He found that, before that time, he had cut and cured sixty-three, of whom there were then living thirty-nine. In twenty-eight of these, the operation had been performed more than two years before; the remaining eleven had been cut during the course of the two preceding years. From this survey, our author concludes, that a great majority of his patients lived as long after the extirpation of the cancers, as, according to the bills of mortality, they would have done, had they never been affected with cancer or undergone any operation. Since the date of this survey, Mr Hill has cut twenty-five other patients, twenty-two of which are still alive.

Our author acknowledges, that, besides two cases which did not heal after the operation, some others also misgave. In nine cases, the disease broke out a-fresh, either in the part before affected, or in some other part of the body. And, another at the time when Mr Hill finished this treatise, which was in July 1770, was threatened with a relapse.

After this general view of the success with which extirpation was attended, our author next subjoins short histories of a few remarkable cases, some of which succeeded, others did not succeed.

In

In the course of these, he takes occasion to mention the good effects of futures, after extirpating cancers of the lips. From drawing the retracted edges of the wound together, and retaining them by means of the twisted future, they were made to unite much sooner than they would otherwise have done.

After these observations on cancers, Mr Hill next presents us with some remarks on encysted tumours. Encysted tumours he divides into five species, Atheroma, Steatoma, Meliceris, Struma, and Hydatides. All these, he observes, are so distinct and unconnected, that he never saw any one of them degenerate into another species, nor has he seen any of them end in cancer. He observes, however, that the sarcoma, which may perhaps be reckoned a sixth species of encysted tumour, is not of such a mild nature, and very frequently does turn cancerous.

The number of cancerous cases which Mr Hill had under his care, naturally led him to make frequent trials of hemlock. But, after having often used it, and that too in considerable quantities, he alledges, that he never saw it attended with the smallest advantage. He asserts, that, were it his misfortune to have a cancer, even of
the

the flightest kind, he would not delay the operation, even a single hour, in expectation of a cure from the use of hemlock.

The next subject, of which Mr Hill treats, is the cure of Wens. By this term he means those encysted tumours only which are denominated Steatoms. When it can be done, he advises, that the tumor should be turned out entire, by raising the four corners of a crucial incision, without opening the cyst. When this cannot be done, they may frequently, he alledges, be digested out by running a seton through them in the direction of the length of the tumor.

As this treatise was not put to the press for two years after Mr Hill had written it, he subjoins, as an appendix to this chapter, some remarks which had occurred to him during that interval. In this appendix, we are informed, that he has cut seven other patients, all of whom continue to do well. From this success, our author concludes, that by far the greatest part of cancers must be local, and occasioned merely by some accidental hurt. Hence, he thinks, that, by removing the diseased parts, the constitution will be left sound ; unless when by long delay the blood comes to be affected, from the ichor of

cancerous ulcers being absorbed. From this, he concludes, that no cancer should be allowed to continue till it be ulcerated. This appendix is closed with a remarkable history of a fatal suppression of urine, from a large hydatide tumour. It was situated between the neck of the bladder and the rectum, and compressed the neck of the bladder so strongly against the os pubis, that a catheter could not possibly be introduced, even after death.

In the second chapter, Mr Hill treats of disorders of the head from external violence. He here presents us with a particular detail of the cases of many patients, some of whom were saved by the employment of the trepan, others without it. From these cases he deduces many observations. He alledges, that protrusions of the brain, which, after the operation of the trepan, often prove very troublesome, are neither to be cured nor prevented by compression with lead plates, as has been advised by Le Dran and others. He recommends the excision of every part of the brain which protrudes in that way; and affirms that he has done it in so many cases, and in such considerable quantities, that he is certain it can never be attended with the smallest danger

danger or inconvenience. It will, he alledges, be renewed in the same manner, as loss of substance in any other part of the body.

In searching for fissures, after wounds or blows on the head, our author advises, that the integuments should be spared as much as possible. For the purpose of detecting these, therefore, he recommends a single, or, if that should fail, a crucial incision.

In cases of depressions of the skull, without fracture, our author dissuades us from having recourse to many of those contrivances which are employed to raise the bone; such, for example, as adhesive plaister, cupping, the screw, and different kinds of levators. According to our author, the general effect of these contrivances is, to raise the integuments without affecting the bone. When such depressions are attended with bad consequences, bleeding, and other evacuations, will, in general, remove them. But, if those means should fail, he advises, that the trepan be applied upon the sound bone near to the depression, in order to afford an outlet for any blood or matter that may be extravasated below. This, however, he alledges, will seldom be necessary. As a confirmation of the doctrine which

is here delivered, Mr Hill relates several cases of depression which turned out well, although little was done. He relates, also, others, in which the integuments were laid open, and considerable exfoliations took place, rendering the cure much more tedious than probably would otherwise have been the case.

From much experience, our author is convinced, that opening the meninges of the brain, after the operation of the trepan, is attended with no danger. He recommends it as the most effectual way of relieving the patient, either when matter is suspected to be lodged between the dura mater and brain, or when this membrane itself is inflamed.

In the close of this chapter Mr Hill cautions us against healing up wounds of the head suddenly, by drying escharotic applications. The many headaches, vertigos, and other complaints, which sometimes continue for life, after trepaning, are, he imagines, entirely owing to the discharge from the wound being soon dried up. He advises, therefore, that this should be guarded against as much as possible.

After finishing this chapter on wounds of the head, Mr Hill concludes this treatise with a short
account

account of that distemper, which in Scotland is termed the Sibbens. This disease has been supposed to be very different from the Lues Venerea. Our author, however, alledges, that they are perfectly the same. The Sibbens, he tells us, was brought into that part of the country where he practises, not above fifty years ago, by some pocky soldiers, who, to prevent their debauching in town, were dispersed through the neighbouring villages. He alledges, that there is not a symptom in the Sibbens which does not also accompany the Lues Venerea through all Europe; that the former is not more infectious than the latter; and that it cannot, as has often been alledged, be communicated from being in the same family or company, unless there be, at the same time, a nearer connection with the infected. With regard to the cure of this disease, he observes, that mercury, when properly exhibited, is a certain remedy; and that it is at the same time the only remedy which can be depended on. He tells us, that, by throwing in a mild preparation of it, he has cured numbers, without confining them to the house, even in frosty or snowy weather. He had formerly written a more full detail of the method of cure than is here delivered.

But he concludes with observing, that the directions given by Dr Gilchrist, in a short tract lately published upon this subject, entitled, "An Account of a very infectious Distemper," render any addition unnecessary, as Dr Gilchrist and he agree in every material circumstance.

III. *A Trea-*

III.

A Treatise on the Management of Pregnant and Lying-in Women, and the Means of curing, but more especially of preventing the principal Disorders to which they are liable. Together with some new Directions concerning the Delivery of the Child and Placenta in natural Births. Illustrated with Cases ; by Charles White, F. R. S. Member of the Corporation of Surgeons in London ; and Surgeon to the Manchester Infirmary. 8vo, London.

THE subject of this treatise is so fully expressed in the title-page, as to render any general account of the author's design altogether unnecessary. We proceed, therefore, to present the reader with a summary view of the particular parts of Mr White's work, in the order in which they are considered in this treatise.

The puerperal or child-bed fever, is the first subject of which our author treats. This fever, he thinks, is of the putrid kind. In support of his opinion, he endeavours to shew, that the remote causes of this disorder are such as will naturally induce putridity ; and that the disease itself,

when actually present, is always attended with symptoms which bear evident marks of putrefaction. He points out many gross improprieties in the management of pregnant and lying-in women, which he considers as the great sources of those disorders to which women in child-bed are peculiarly liable.

Pregnancy is frequently attended with costiveness, occasioned by the pressure of the uterus on the under part of the intestines. But, instead of taking proper measures to remedy this inconvenience, the evil is, for the most part, increased, by a tight heavy dress, a sedentary life, and improper diet. Thus, there must necessarily take place an absorption of excrementitious matter, which will diffuse a putrid tendency through the system. In the time of labour, the air of the chamber, frequently over-heated by a large fire, and corrupted by the breaths of numerous attendants, joined to the putrid steams arising from the woman's own body constantly bathed in sweat, still farther increases the disposition to putridity. After delivery, continues our author, women are often pent up for days together, in a putrid atmosphere; are necessitated to drink large quantities of warm relaxing liquors; and are confined to a horizon-
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tal posture, which is highly unfavourable for promoting the natural discharges by the intestines and uterus. Mean while, by neglecting to draw their breasts till several days after delivery, the first milk, which is purgative and stimulating, is taken up by the absorbents, and carried back into the system. This treatment, he observes, cannot fail, either to generate a tendency to putrefaction, or to promote that which former errors had already induced.

Having made these observations on the causes, he observes, with regard to the symptoms of this disease, that it is frequently ushered in by a cold fit, which, by the force of spirituous liquors, and hot spices, is soon succeeded by intense heat, and profuse putrid sweats. These are often kept up by the same means first employed to excite them, for nights and days together, without any relief to the patient. At other times, the disease creeps on gradually, without any cold fit, and manifests itself by putrid sweats, nausea, bilious vomitings, frequent foetid dejections, unexpressible anxiety, lassitude, debility, miliary eruptions, petechiae, and a train of other symptoms, which clearly shew a prevailing putrid diathesis.

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Our author observes, that, upon dissection, the intestines, or some other of the abdominal viscera, have, in general, been found in an inflamed or gangrened state. He alledges, that, although these appearances would seem to favour the opinion of those who ascribe the puerperal fever to simple inflammation; yet the absence of the excruciating pains, usually attending inflammations of the bowels, is a circumstance which renders this opinion less probable, than that which he endeavours to establish.

This chapter is concluded with some remarks on the different descriptions which have been given of the puerperal fever by medical writers. Their disagreement, Mr White is inclined to ascribe more to accidental differences in the management of the disorder, than to any essential variety in the nature of the disease.

In the second chapter, the author treats of the miliary fever, a subject which, of late, has particularly engaged the attention of the medical world, by the warm disputes of which it has been productive among some of the most eminent of the faculty. No accurate description was given of this disease previous to its appearance at Leipzig, about the middle of the last century. But,
from

from a variety of passages in antient authors, Mr White thinks it highly probable, if not absolutely certain, that it has occurred to practitioners from the days of Hippocrates downwards. Since the time of Dr Sydenham, who first accurately described it in England, it has been particularly treated of by many medical writers. These writers have differed widely, both concerning the pathology and cure of this disorder. Some consider the eruption to be the regular crisis of a primary idiopathic disease. While others have looked upon it merely as an accidental symptom, occurring indiscriminately in all diseases attended with sweating, and at all periods of those diseases. Notwithstanding these differences, however, Mr White observes, that most writers on the miliary fever, agree in the following particulars concerning it: That puerperal women are peculiarly liable to it: That it is of a putrid tendency: That the eruption is promoted by sweating in bed; and is most plentiful on those parts of the body which have sweated most: That, whatever the eruption may be, the sweats attending it are by no means critical: That, in one case, there will occur more than one crop of miliary pustules: That miliary eruptions will
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sometimes accompany inflammatory fevers; and that the danger with which they are attended is in proportion to their quantity and early appearance.

The general consent of authors, with regard to these particulars, the direct authority of Altonius, a physician of eminence at Turin, and the great similitude between the symptoms of miliary and putrid fevers, induce our author to consider them as having a near affinity to each other. The eruption, he alleges, is the only distinctive mark between the two. This, however, he apprehends to be totally unconnected with the fever, as he has often seen miliary eruptions, both of the red and white kind, without any fever; and, on the other hand, all the symptoms of miliary fever, without any eruption. He farther observes, that, in many cases, this eruption depends solely on a hot regimen, or the long continuance of sweating.

Upon the whole, he concludes, that miliary eruptions are universally preceded by sweating; that they are by no means critical; that no prejudice will arise to a patient from their being checked by cool regimen in the beginning of the disease; that puerperal women are peculiarly liable to them from
their

their disposition to putrescency, joined to the relaxed state of their skin, which is induced by long continued sweating; and, lastly, that the miliary eruption is produced by the cuticular discharge being increased in quantity, rendered acrid, and acquiring a putrid state.

Mr White concludes this chapter, with observing, that his opinion of the miliary fever is perfectly conformable to that of Dr Cullen, an authority, deservedly, of great weight in medicine. To prove this similarity in their opinions, Mr White subjoins part of a lecture on the miliary fever, given by Dr Cullen, and taken from the notes of one of his pupils.

Another disorder to which lying in women are exposed, is the milk fever. This is the subject of the third chapter. This disease, we are told, depends upon the re-absorption of milk, which by stagnating has contracted a peculiar acrimony. This stagnation is sometimes owing to negligence, sometimes to the state of the nipples, which, by the constant pressure of the tight stays, are often preternaturally flattened, and so buried in the breasts, as to render the drawing of them impracticable.

ticable. The author observes, that the lower class of women, whose necessary labours do not admit of that tightness in dress, which is so common among their superiors, seldom suffer any such inconvenience. He thinks it, therefore, of the utmost consequence for the female sex to be cautious in this part of their dress. His observations on this disease are concluded with an anatomical description of the structure of the mammae, from which he deduces an explanation of the several phaenomena of suction.

The fourth chapter contains general directions for preventing some disorders peculiarly incident to pregnancy. He insists particularly on the impropriety of bleeding pregnant women, when no urgent symptom indicates that evacuation. He affirms, that, even in plethoric cases, in which bleeding is generally thought necessary, much more benefit may be had from the use of asses milk, Pyrmont and Seltzer waters, elixir of vitriol, and gentle exercise on horseback. Keeping the belly open, he points out as an object of considerable importance. For this purpose, he recommends the liberal use of ripe fruit and vegetables; and, if medicine be necessary, he advises, that recourse should be had to small doses of aloetic, and
other

other bitter antiseptic purgatives. To cleanse the stomach, when foul, gentle emetics, he tells us, may be used with safety and advantage. For the temporary jaundice, to which pregnant women are liable, he advises the use of raw eggs. In confirmation of this practice, he tells us, that, by means of raw eggs, he was himself cured of an obstinate jaundice, some years ago; that he has since recommended them to many others; and that they have always succeeded, unless where the jaundice depended, either on a diseased liver, or on biliary concretions. Instead of tight stays, which some pregnant women very injudiciously wear, he advises the use of slack jumps with broad shoulder-straps; and, instead of tying the petticoats round the belly, he directs them to be fastened to tapes sewed to the bottom of the jumps. But, if the belly be remarkably pendulous, he advises the use of a broad bandage, to counterbalance the pressure on the bladder. Lastly, he advises women in the latter months of pregnancy, to be frequently in a recumbent posture, with a view of preventing the pains of the belly, back, and thighs, and swelling of the legs, which are so common at that period.

The fifth chapter contains directions, respecting the management of natural labours. The author's

thor's general view in these directions is to induce practitioners to pay the most religious attention to nature in their whole conduct, and never to have recourse to art, unless where it is necessary to regulate or assist the efforts of nature. He condemns the vulgar practice of tying the umbilical chord immediately upon the birth of the child. By delaying it for a few minutes, says he, the changes in the circulatory system will take place gradually; and the circulation in the chord will cease of itself. By this time too the secundines are generally expelled, or, at least, may be easily extracted, by gently pulling the navel-string, when a pain comes on. He prefers bringing away the placenta in this manner, to the practice of leaving it to come away of itself, as he imagines, that, by allowing it to remain, it is apt to occasion violent afterpains, dangerous floodings, or putrid diseases.

The prevention of the miliary and milk fevers is the subject of the next chapter; many directions are here given concerning the management of women after delivery. But the following particulars are inculcated by our author as the most essential: Cool regimen, the constant admission of
fresh

fresh air, a light diet, consisting more of vegetable than of animal food, the free use of cold drink, particularly of liquors acidulated or mixed with antiseptic matters, great cleanliness, an upright posture soon after delivery, keeping the belly open, the early application of the infant to the breast if the mother be to suckle, or, if not, the having the breasts regularly drawn. By strict attention to these particulars, Mr White assures us, that his own practice has been attended with remarkable success. The frequent deaths of lying-in women, in some of the London hospitals, and in some parts of the country, he imputes to the corruption of the air in crowded wards, and to errors in the diet and dress of the women, from the mismanagement of nurses. In order to prevent the inconveniences arising from the heat, moisture, and stagnation of the air in lying-in hospitals, he proposes ventilation by means of air-pipes. He recommends also the method proposed by Dr Alexander for correcting vitiated air, by fermenting antiseptic mixtures; and tells us that, in putrid cases, he has often used it with great advantage.

In the seventh chapter, the author delivers the cure of the puerperal fever. His cure is perfectly conformable to his theory. He directs, that

the same general principles should be followed in this as in other putrid diseases. After cautioning, therefore, against the abuse of hot regimen and stimulating medicines, with a view to shorten the cold fit, at the almost certain risk of adding to the violence of the subsequent hot one, he recommends cleansing the primae viae by gentle emetics, and by mild, saline, antiseptic laxatives, assisted by emollient injections. He recommends also saline draughts, in the act of effervescence, with a view to allay feverishness. Bleeding, and, in general, large evacuations, are to be avoided. The same attention is necessary for supporting the vis vitae in this as in other putrid fevers; cool fresh air, and general cleanliness, he likewise advises, as equally indispensable.

The cure of the miliary fever, which is the subject of the following section, differs in nothing essential from that of the puerperal. Evacuants, in general, he condemns here, gentle emetics and laxatives alone being admissible. Even blisters, he tells us, except as stimulants in the last stages of the disease, are hurtful. He is of opinion, that pure, free, cold air, cautiously admitted, the prudent use of cold acidulated drink, a frequent up-
right

right posture, and the greatest cleanliness, are the particulars chiefly to be depended on in the cure.

To these general doctrines, our author subjoins fifteen cases, with a view of illustrating what he had before delivered, respecting puerperal and miliary fevers. From these cases also, our author thinks it appears, that fatal floodings and other bad effects, will often arise from the retention of the placenta; from which he infers the necessity of removing it soon after the delivery of the child.

This treatise is concluded with a postscript, containing some remarks on a treatise on the puerperal fever, lately published by Dr Hulme, which did not fall into our author's hands till his book was finished. From several dissections, Dr Hulme had concluded, that the puerperal fever depends upon an inflammation of the intestines and omentum. Mr White, in order to shew the fallaciousness of this opinion, endeavours to prove, by quotations from Cleghorn, Sir John Pringle, Lind, and other eminent authors, that the very same appearances are almost constantly observed in all fatal putrid fevers. He is of opinion, therefore, that, in many cases, they may be more properly con-

siderd as the consequences than as the causes of the disease.

Dr Hulme assigns the pressure of the gravid uterus against the intestines and omentum, as the principal predisponent cause of this disease. To this opinion our author objects, that, were it true, the puerperal fever should happen rather before than after delivery.

Dr Hulme had farther urged, in favour of his opinion, that from it we can see the reason why all women have been, and ever will be, liable to this disease. To this, Mr White replies, that the disease by no means takes place so frequently as Dr Hulme imagines, nor, indeed, as it certainly would do, did it depend upon the causes which the Doctor assigns. The proof of this fact Mr White rests, not only on his own observation, but upon the concurring testimony of persons of great note in the practice of midwifery; to many of whom, he assures us, this disease is, in a great measure, totally unknown. As farther evidence, he adduces extracts from registers kept in various lying-in hospitals, from which he thinks it appears, that this disorder is more or less frequent in proportion as ventilation and cool regimen are more or less strictly attended

tended to. He concludes the whole, by mentioning, from Dr Young, some particulars, respecting the management of the lying-in ward in the royal infirmary at Edinburgh. To these he ascribes the remarkable success attending the practice of midwifery in that hospital, and, in a particular manner, the total absence of this fever.

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IV.

Experiments upon the Human Bile, and Reflections on the Biliary Secretion; with an introductory Essay. By James Maclurg, M. D. 8vo, London.

IN the introductory essay prefixed to these experiments, the ingenious author inculcates the necessity and advantage of reasoning in medicine. He is at particular pains in obviating the objections which have been made to reasoning, from the frequent and great changes which medical theories have undergone. And he even goes so far as to alledge, that the perpetual growth and contention of systems is a mark of vigour in the state of medical knowledge.

His experiments upon the bile are thirty-eight in number. All of them were made with human cystic bile; and most of them in the way of mixture.

In the first eight experiments, the author endeavours to ascertain the effects of mineral acids upon the bile. These he found, when applied strong, united with the bile, and dissolved it in a
short

short time, with some variations of the phaenomena producing a fine green colour.

From the inflammable nature of biliary concretions, and from the effects of the principle of inflammability upon acids in metallic substances, and other mixtures, as explained by Dr Black in his chemical lectures, Dr Maclurg concludes, that the green colour is to be ascribed to the union of the acids with the phlogiston of the bile. In this opinion he is confirmed by the fugitive nature of this green colour upon the mixture of nitrous acid and bile. This colour vanishes, while a flame coloured elastic vapour flies off from the mixture. And farther, as the bile, upon the addition of acids, loses, not only its colour, but also its bitterness, he concludes, that both the colour and taste of the bile depend upon the phlogiston which it contains.

In the ninth and tenth experiments, the author gives an account of the effects of vegetable acid upon the bile. He found, that vinegar and juice of lemons instantly coagulated bile, at the same time changing its colour to yellow.

From the eleventh experiment, it appears, that the mineral acids, in a diluted state, have nearly the same effect upon the bile as the vege-

table. This Dr Maclurg ascribes to their having, when in a diluted state, a less vehement attraction to phlogiston. By the twelfth and thirteenth experiments, he finds, that bile is also coagulated by spirit of wine, and by heat. This suggested to him the suspicion of there being a quantity of coagulable lymph in the bile; in which opinion he was confirmed by the fourteenth and three following experiments. In these, he separated the coagulable substance from every other part of the bile, and found it answer to all the tests of coagulable lymph when tried with spirit of wine, alkali, and acid.

The coagulum of the bile, formed by the vegetable acid, being a combination of the colouring matter of the bile with its lymph, is the subject of the eighteenth and six following experiments. From trying this coagulum with different acids, water, spirit of wine, a solution of caustic alkali, &c. it appears, that the colouring matter of the bile is affected by the same relations when coagulated, as before coagulation. That the vegetable acid, however, does produce some change upon it, is evident, from the colour of the coagulum being different from that of the original bile. As by this change the cystic bile approaches

approaches nearer to the colour of the hepatic, and, as its former colour may be restored by the addition of an alkali, the author concludes, that the colour of the cystic bile depends upon an alkaline nature which it acquires during its stagnation in the gall-bladder. This circumstance, he thinks, may also account for its greater bitterness.

The next set of experiments were made with a view to examine the opinion of Mr Durade, who has alledged, that the colour of the bile depends upon iron. But, upon trials with the alkali prepared for making Prussian blue, and with powder of galls, he could find no reason for being of that opinion.

The eight last experiments are made with a view to determine the relation of bile to putrefaction. Upon trying putrid bile with acids, spirit of wine, and heat, the author found that the coagulability of the bile was diminished by putrefaction; but that its bitterness was rather encreased. It appears, therefore, that the bitterness of the bile resists the effect of putrefaction in changing the qualities of bodies, and continues unaltered, when the coagulable matter has proceeded far in its degeneracy. Besides this,
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from the 36th, 37th, and 38th experiments, the author finds, that bile, in its own nature, is antiseptic, but that, when coagulated by acids, it imparts to water a stronger antiseptic power than is to be found in pure and unaltered bile. From this he concludes, that the antiseptic principle of the bile is connected with its bitterness, and that probably it is also a quality of the colouring matter.

After these experiments, Dr Maclurg proceeds to his reflections on the biliary secretion. Here our author first remarks a strong analogy between the milk, the bile, and the common mass of blood. Their basis, he observes, is a coagulable matter. They all contain a matter analogous to the sugar of vegetables; and, from the best chemical analysis, their saline contents appear also to be the same. Their colouring matter, he observes, is indeed a good deal different: But, as the best chemists suppose that the colouring matter of the blood is formed from the oil of the milk, so the same powers continuing to act may, he imagines, change the colouring part of the blood into that of the bile. He allows, however, that these colouring matters, although, in their nature analogous, are in different

different states, as they do not give the same phenomena on their mixture with the acids.

The author next observes, that the yolk of an egg has a great analogy to the blood. It is intended for the formation of blood in the foetus, and contains a colouring matter, which, like that of the blood and bile, flies off with strong acids. Thus, says he, we have a scale of animal fluids, all of which are similar, yet all different. These are, the milk, the yolk of the egg, the blood, and the bile. It is their common character to contain a coagulable matter, united with other ingredients, the chief of which is phlogiston.

This phlogiston, by the animal process, is gradually evolved, and, at length, in the bile, gives evident indications of its being present in the most simple and active state. In proof of this, he adduces many arguments, with a view to establish a connection between the oil of the milk, the colouring matter of the blood, and that of the bile. These are chiefly deduced from the influence of diseases upon the bile, and the effects of exhaustion, either by large evacuations, or want of aliment.

After his remarks on the colouring matter, he next makes some reflections on the coagulable
part

part of these similar fluids. From experiments and observations, he concludes, that, in the milk, which is the one extreme of this scale, the union of the coagulable lymph with the other parts is the least intimate; and that, in the bile, which is the other extreme, it is most complete. He supposes, therefore, that the union of the parts of these analogous liquors, is gradually rendered more perfect by the continuance of the animal septic process.

Having thus stated the relation between the bile and other animal fluids, Dr Maclurg next applies these observations to account for many phaenomena in diseases, particularly for that great redundancy of bile so much connected with the intermittent and remittent fevers, and the dysentery of warm climates. He is of opinion, that the marsh miasmata, inducing these fevers, operate as a putrid ferment in the system. Hence the biliary secretion, which is intended for the discharge of degenerating lymph and red globules, must be augmented by the introduction of this ferment. He concludes, therefore, that the increase of this secretion is a means which nature employs in these disorders for her relief; and that the general method of cure should consist

consist in promoting the biliary discharge by the safest and most expeditious means ; and in correcting, by tonics and antiseptics, that state of the constitution which makes it necessary.

Our author's next reflections are, with respect to the influence of bile upon digestion. He is of opinion, that digestion is performed by fermentation, and is attended with the constant generation of acid in the stomach. The first operation of this acid liquor, after passing the pylorus, will be to coagulate the bile. The coagulum of bile is not miscible with water, but communicates to it something of a more antiseptic nature than pure bile itself. Thus the antiseptic principle is evolved and separated from the putrescent coagulable part. And, while the latter is committed to the alvine discharge, the former is applied to useful purposes in the oeconomy. This, he observes, gives us another view of the final cause of that large secretion of bile, which is the constant effect of long continued heat ; and of that appetite for acids which then subsists.

One of the most curious facts respecting the secretion of bile, is its relation to the passions. This is the next subject of reflection. The secretion of bile is remarkably increased, by anger and

and by terror. These passions are intended to prompt us to oppose, or to avoid any power which threatens danger. And here the author imagines we must look for the final cause of the large secretion of bile which in general attends them. Low spirits, timidity, and despair are frequently observed to be effects of a feeble state of action in the alimentary canal. An opposite temper of mind is connected with an opposite state of this function. A quantity of bitter fluid, therefore, poured into the alimentary canal, by stimulating it to a stronger action, will answer the purposes of both passions.

The next observation our author makes is, with respect to the influence of bile upon temperament. A bilious temperament, he observes, is naturally produced by excessive heats, and is the common one in warm climates. This he ascribes to the acceleration of the septic animal process which there takes place.

The last subject on which our author offers any reflections is biliary calculi. He observes, that art can do little in removing these concretions; and that therefore it should be our endeavour to trace them to their origin, and discover, if possible, the means of preventing their formation.

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From many facts, he is inclined to believe, that the common opinion, of gall-stones being formed in consequence of the stagnation of bile, is illfounded, and that many of them are originally bile coagulated by an acid. This acid, formed in the stomach, may, he imagines, be insinuated into the end of the ductus communis, and the bile with which it there comes in contact, will immediately take the form of a cheefy concretion. This coagulum will afterwards be either pushed into the duodenum, or carried into the gall-bladder, according to the determination of motion in the ducts. In the latter case, it will produce biliary calculi.

The author, however, does not imagine, that, in this way, all biliary concretions are produced. Those found in the biliary pores of oxen are, he allows, independent of coagulation from acid; and he alledges, that their different appearance evidently shews a different origin. These he ascribes to a general disposition in the fluid to concreate.

From some experiments made with biliary concretions, he concludes, that they are composed of the same materials with the bile itself; but that
they

they have undergone some spontaneous change, during their stagnation in the body. Hence the colouring matter of these calculi does not produce that fine vivid green with acids which the bile itself and the fresh coagulum of that fluid exhibit. And the coagulable part has acquired the appearance of a calcareous or chalky matter.

Granting that acid in the alimentary canal is a source of biliary concretions, their prevention, our author observes, is not to be effected by the destruction of acid. Acid is continually generated in digestion, and probably serves some important purposes in the oeconomy. Besides, in the healthy animal, it produces no bad effect. Most probably, then, it only tends to generate calculi, in consequence of some inversion of the ordinary motion in the alimentary canal, which is in some degree confirmed, from considering that biliary calculi are connected with gouty and nephritic constitutions. In order, therefore, to prevent the formation of biliary calculi, every thing which tends to weaken the nervous system, and of consequence the alimentary canal, must be avoided. With this view, sedentary life, and full luxurious diet, are particularly to be guarded against.

gainst. Recourse must, at the same time, be had to those means which nature seems to have appointed for maintaining the vigour of the system, especially a certain degree of cold, and proper bodily exercise.

V.

Jacobi Bartholomaei Beccarii *Opusculum de Lacte. Vid. De Bononiensi Scientiarum et Artium Instituto atque Academia Commentarii. Tomi Quinti Pars prima, 4to, Bonon.*

BECCARIUS had formerly published several experiments on corns and broths of different kinds, which received very general approbation. His industrious researches have not stopped there. In the paper now before us, we are presented with the result of many experiments which he has made on milk. Without repeating the experiments which had been made by Boerhaave and Macquer on this subject, he takes it up where they had left it. Boerhaave, from his experiments, had concluded, that cows milk which was the subject up-

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on which he chiefly operated, neither contained an acid nor an alkali; that it was hardly in any degree saline; and that it yielded no spirit upon distillation. And Macquer was of opinion that it contained no salt, which was not to be referred to the tribe of acids, and yielded nothing which gave even the slightest indication of volatile alkali. The experiments of our author, however, led him to form very different conclusions.

His first experiments were made with that fatty, sweet-tasted residuum, which is obtained on the simple distillation of milk. With this he filled a retort to about two thirds, and subjected it to a heat, at first gentle, but afterwards encreased to a considerable degree. In the beginning, a watery, limpid, tasteless liquor arose; after this, it appeared of a straw colour, and was somewhat acid to the taste; it then became more and more of a deep colour, and, at the same time, more acid; towards the end, it became blackish and empyreumatic; and, at last, upon the heat being greatly encreased, white vapours arose and flew about the receiver, till some of them were condensed into a liquid, and others adhered in a solid state to the sides of the vessel, in the form of distinct and beautiful ramifications; in the mean time, a
thick

thick foetid oil began to cover the top of the liquor, which put an end to the process. In the retort, there remained a thick black coloured substance.

The next experiments made by the author were with the serum of the milk. By a very gentle heat, he drew off all the watery part of the serum, so as to leave nothing but what is commonly called the sugar of milk. This he subjected to the same process as the mass last mentioned, and with precisely the same effect.

From these experiments, Beccarius was led to imagine, that both the milk, taken altogether, and the serum, when separated from it, contain no inconsiderable proportion of a volatile alkaline salt. To satisfy himself with regard to this, he next endeavoured to investigate the nature of those products which he had obtained. From the common tests by which acids and alkalines are detected, he found that the fluid which he had obtained was an acid. Whilst the more solid sublimate which came over at last, was evidently of an alkaline nature.

Having, from these experiments, discovered that both milk and its serum contain a volatile alkali; he observes, that an alkali might naturally be sup-

posed to be present also in cheese. But, as Mr Macquer had been of a different opinion, he resolved to determine this also by experiment. For this purpose he employed a glue, well known to joiners, which is prepared from cheese by boiling and pressure. He was led to prefer this glue to the cheese itself, as he had formerly found, that even the glue from corn was of an animal and alkaline nature. Having put some of this glue into a retort, he exposed it to a heat at first gentle, but afterwards more considerable. There arose, at first, a limpid fluid, then a turbid milky one of a urinous smell. After this, there came over a vapour, some of which covered the sides of the receiver, and some was converted into an acrid liquor, very similar to that which is obtained from animal substances. Along with all these products, some oil came over, which became thicker and blacker as the distillation advanced. The mass remaining in the retort was very dry and much burnt.

Our author concludes this paper, by pointing it out as a subject of enquiry, whether these alkaline salts be always present in the milk in a determined proportion? or, whether the quantity produced may be varied by the means used for

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obtaining them? This question, from the experiments now before us, he admits, that he is unable to determine. But, he observes, that, from the experiments which he has made on wheat, it appeared that the proportion of alkaline salt, contained in equal quantities of the same matter, never varied.

VI.

Vincentii Menghini *Opusculum de Aquarum vi in Calculis dissolvendis. Vid. De Bononiensi Scientiarum et Artium Instituto atque Academia Commentarii. Tomi Quinti Pars prima, 4to, Bonon.*

MENGHINUS had observed, that different waters possessed a power of dissolving human calculi. He was led, therefore, to make the following experiments, with a view of discovering, whether this power resides in pure water, or is the effect of their being impregnated with any particular substances.

With this intention, he employed five different kinds of water, viz. distilled rain-water; rain-

water not distilled; well-water, with a small impregnation of clay; very pure well-water; and rain-water impregnated with soluble tartar. To ten ounces of each of these waters, put into a phial by itself, he added a bit of hard human calculus, weighing fourteen grains. To prevent any deception in these experiments, the bit of calculus put into each phial was taken from the same mass. These phials were then exposed to a heat very near that of the human body. At the end of a few days, air-bubbles could be discovered on the surface of the water contained in all the phials. These continued, at times, to arise during the whole space for which they were kept in this state. At the end of twenty days the calculi were taken out. That which was in the distilled rain-water had lost two grains of its weight; and, after rubbing off from it a thin mucous coat, upon being touched, it tinged the fingers with a white colour; small pieces could, at the same time, be easily broken off from it. The stone, which was in the undistilled water, had lost three grains of its weight. Every other circumstance attending it was the same as before observed with regard to the last. That which was in the well-water impregnated with clay had lost six grains,

grains, with the same appearance as the two former. That in the pure well-water had lost seven grains, and was in the same state with the others, except, that its covering was of a gummy, rather than of a mucous consistence. And, lastly, That which had been in the rain-water, impregnated with soluble tartar, after the removal of its mucous covering, which weighed half a grain, was found to have lost eight grains. Our author farther observes, that all these waters, a few days after the stones were taken out of them, deposited sediments, but with different appearances.

Still farther to determine the respective differences of these waters, in dissolving calculi, the same stones were again put into waters of the same kind, and in the same manner. That which had before lost eight grains, was now reduced to one grain. Those put into the two different kinds of well-waters, and into the undistilled rain-water, lost each four grains more. And, lastly, That in the distilled rain-water suffered a diminution of one grain only. From these experiments, then, the author concludes, that the power which waters possess of dissolving calculi depends upon some impregnation; and that this power is varied

ried in different waters, from differences in the substances with which they are impregnated.

• The author, next, endeavours to determine the comparative power of dissolving calculi, obtained by different impregnations; and, from a set of experiments, made with this view, he found, that soluble tartar is more effectual in rendering water capable of dissolving calculi than Glauber's Salt, Sea Salt, Nitre, Sal Ammoniac, Alum, or Regenerated Tartar.

VII.

Jani Planci Ariminensis *Epistola de Urina Veneta. Vid. De Bononiensi Scientiarum et Artium Instituto atque Academia Commentarii. Tomi Quinti Pars prima, 4to, Bonon.*

THE author of this letter gives an account of a man, who, for eight or ten days before his death, voided urine with a sediment resembling Prussian blue. This patient was about sixty years of age, and of a strong constitution; but he had for two years laboured under a dysuria. This, however, had been lessened by diluents,

ents and demulcents. A few days before his death, being much depressed with grief, he was attacked with a fever, attended with great dryness of his tongue and fauces, probably in consequence of his refusing to drink sufficiently. It was not, however, accompanied with any considerable heat, or great alteration in his pulse. After the third day of this fever, he began to discharge urine with a blue sediment. Our author collected it for three mornings, evaporated it by the heat of the sun, and found it greatly to resemble the Prussian blue. For the three succeeding days, the whole urine discharged during the night, at which time the blue sediment had before principally appeared, became of a greenish colour, and acquired a smell, much resembling that of spirit of Sal Ammoniac. From this urine, upon being filtrated, a powder was obtained resembling verdegris. For the three last days before death, the urine could no longer be collected, as it was constantly discharged in drops; but, during this time, it continued to tinge the linens of a blue colour. He then died, being at length worn out by continued abstinence from food and medicines.

Upon

Upon examining his body the day after, the back part appeared very livid, and, on the fore part, were many pustules, resembling the eruption in the gutta rosacea. These pustules had begun to appear a few days before his death. The bladder was much thickened, and had numerous plicae resembling those of the stomach. The sphincter of the bladder was much contracted; but the ureters were so much dilated, as to be about the size of the intestines of a lamb. A portion of urine was contained in the bladder; but it had not the blue sediment. The kidneys were flaccid, but sound, and had no appearance of any blue tinge. The intestines, stomach, and lungs, were gangrenous.

Whilst this case was the subject of conversation, a woman, aged about sixty, came to the author, and gave him an account of something similar having happened to herself. She informed him, that, about twenty years before, she had laboured under hysteric symptoms, which she ascribed to a deficiency of her menses. For the removal of these complaints, she took some medicated broths; and, when she was costive, a small pill less than a pea. But, from this pill, a violent purging came on, which was succeeded
by

by a discharge of urine with a blue sediment. This sediment adhered so strongly to the sides of the vessel in which the urine was contained, that it was with great difficulty removed from thence. After three or four days continuance, this appearance in her urine ceased. It deserves to be remarked, that, in this case, as well as the former, it was not the urine itself, but the sediment only, which had a blue colour.

After narrating these two cases, our author observes, that Actuarius, one of the last Greek physicians, gives an instance of blue urine in a boy, from taking a bitter pill, intended for another patient. In that case, the urine was first black and then blue; but soon after, it resumed its natural colour without any inconvenience. Actuarius alledges, that such urine is not a dangerous symptom, if it proceed from any medicine; but that, in all other cases, a blue colour in urine is next to a black one, the most fatal appearance that can occur in it. Our author, however, thinks it probable, that Actuarius had never seen any other case of blue urine, as he mentions this one only. He concludes, therefore, that he had formed his prognosis concerning it entirely from the Galenical doctrine of humours.

Our

Our author concludes this letter, by hinting it as a supposition, that the pills taken by the old woman, and by Actuarius's boy, might have been composed of colocynth. In proof of which, he observes, that this medicine is not only bitter, but is likewise a strong purgative. He seems also to think, that his patient might have taken some such medicine, although he would not discover it.

VIII.

Gusmani Galeatii *Opusculum de Cortice Peruviano*. Vid. *De Bononienſi Scientiarum et Artium Instituto atque Academia Commentarii*. Tomi Quinti Pars ſecunda, 4to, Bonon.

THE intention of this diſſertation is, to correct ſome particulars obſerved by the celebrated Torti, reſpecting the uſe of Peruvian bark in the cure of intermittent fevers, which our author thinks are contradicted by experience. He ſets out with obſerving, that the enumeration of the ſpecies of fevers, which is given by Torti, is incomplete. To theſe ſpecies, he thinks, one ſhould

should be added, which is necessarily attended with asthma, and which may be removed also by the use of bark.

The nature and cure of this fever he illustrates with two cases. The first is the case of a man about seventy years of age, who was attacked with an acute continued fever, attended with orthopnoea, stertor, and cough. This fever, about the seventh day, manifestly remitted, the symptoms being always more mild in the morning, and suffering an exacerbation in the afternoon. With a view to remove it, the patient had been blooded three times, and had taken emollients and attenuants; but without any relief. He was then ordered to take eight drams of Peruvian bark every day; but he had scarce taken it two days before he expectorated a large quantity of bloody bilious matter, by which his symptoms were greatly relieved; and, in a few days longer, from the continuance of the bark, he was restored to perfect health.

The second case is that of a woman, aged forty, who had been seized with a tertian intermittent fever, in the spring, from which she was freed by the use of Peruvian bark. But, forsaking the remedy too soon, and returning to work,
in

in the ensuing autumn, she was attacked with a severe cough, and difficulty of breathing. With these complaints, she could lie only on one side. They were, at the same time, attended with a slow continued fever, which suffered exacerbations towards night. Her expectoration was in small quantities, of a very thick consistence, and greatly resembled pus. Venesection, emollients, and expectorants, gave her no relief. And, as great prostration of strength and emaciation supervened, a phthisis was apprehended. In these circumstances, Galeatus ordered this patient two drams of Peruvian bark every day, continuing, at the same time, proper expectorants. She had scarce taken an ounce of this medicine, before the difficulty of breathing was so far removed, that she could lie in any posture with ease; the fever and cough were lessened, and the expectoration altered much for the better. After continuing this course for about a fortnight, her fever was quite gone, and her strength perfectly recovered.

The next species of fevers, our author considers, are those accompanied with lethargy. In the cure of these, he observes, that the use of Peruvian bark has been no less successful than of
such

such as are accompanied with asthma. On this subject also he presents us with two cases.

The first is the case of a priest, about eighty years of age, who was suddenly seized with stupor, resembling apoplexy, and remained a whole day without sense or motion. These symptoms were at the same time accompanied with fever. By the assistance of blood-letting, and other remedies, he recovered, and continued well for about twenty-four hours. But he was again seized in the same manner as before with a second attack of the fever and other symptoms. From this second remission, our author concluded his patient's disease to be a lethargic tertian. He therefore ordered him an ounce of Peruvian bark, which prevented the return of the lethargy, and greatly moderated the fever. Soon after, it was entirely removed.

The second case is that of a man, about thirty years of age, who had removed a tertian intermittent by the Peruvian bark, and a supervening jaundice by other remedies. But he was soon after suddenly seized with loss of speech and sense, attended with violent cries and convulsive motions. In this condition, he remained above twenty hours, notwithstanding the use of the lancet, cupping, friction, and other stimulants. At length, however,

ever, he very unexpectedly opened his eyes, began to speak, and move, and willingly drank something, which before had been offered him in vain. And, although his fever still remained, it was now become much milder. But, after six hours, it again encreased with a return of the former symptoms. The remedies which were before employed for his relief being again tried in vain, the use of Peruvian bark was determined on. Half an ounce of it, therefore, in fine powder, was immediately given him. And, although he vomited a considerable part of it, yet enough was retained to procure a remission of his symptoms. By the repeated use of it, he was soon after restored to perfect health.

Another particular mentioned by our author, in opposition to the opinion of Torti, is, that the activity of the Peruvian bark in the cure of fevers, may, in some cases, be encreased from combining it with other medicines. He observes, that several cases of cholera morbus and dysentery had occurred to him, which confirm this opinion. Of these, he here presents us with two cases by way of example, in which the Peruvian bark failed, when given alone; but succeeded, when combined with cascarilla.

The

The first was the case of an old man afflicted with dysentery, and a slow remittent fever. After many other remedies had failed, he took two drams of Peruvian bark for several days, without any other effect except a small diminution of his fever. But afterwards, he was soon entirely cured by the daily use of one dram of Peruvian bark combined with a scruple of cascarilla.

The second is the case of an old woman, who, notwithstanding the use of Peruvian bark, was subject to frequent returns of a tertian fever. She was at length seized with vomiting, succeeded by diarrhoea, both which were removed in a few days, by the Peruvian bark combined with cascarilla. After this time she suffered no relapse.

As a farther confirmation of the advantages to be derived from combining Peruvian bark with cascarilla, the author mentions the case of a young knight, who employed it for the cure of a tertian, under which he laboured. It purged and sweated him violently, without relieving his disease. But, upon the addition of the cascarilla, he was soon perfectly cured of his fever, by means of it, without either purging or sweating.

The author further endeavours to confirm the propriety of exhibiting other medicines with Peruvian bark, in some cases, from the authorities of Albertinus, Mangetus, and Doleus. He likewise differs from Torti, in his assertion that two ounces of Peruvian bark are capable of removing any fever in which it can be of service. On the contrary, he affirms, that he has frequently found it necessary to give it from five ounces to a pound with success.

IX.

Cajetani Tacconii *Opusculum de Rachitide. Vid. De Bononiensi Scientiarum et Artium Instituto atque Academia Commentarii. Tomi Quinti Pars secunda, 4to, Bonon.*

IN this dissertation, the author sets out with a particular history of the case of a woman afflicted with the rickets, in which very uncommon appearances occurred. When about three years of age, she began to be distorted in her thorax both before and behind. In a short time after, not only the spine and ribs, but also the bones of

of the arms were much bent. About the seventh year of her age, to these distortions were superadded weakness, torpor, inactivity, and every other symptom of true rachitis. She lived, however, during a continual encrease of these complaints, till the forty seventh year of her age. But then, being worn out with pain and other afflictions, she died.

Upon opening her after death, a very great tumour presented itself in the abdomen. It was of a white colour, and felt somewhat rough. By its bulk, it filled not only the abdomen, but also a considerable part of the thorax. Part of the intestines were forced into the pelvis, and part with the stomach, spleen, and liver into the thorax. The liver was pushed up as far even as the clavicles. This tumour was covered with a fine thin membrane, which proceeded from the lumbar vertebrae, and was thicker and softer about the kidney than at any other place. There also it was full of varicous vessels. This tumour, at first sight, appeared to be a schirrus; and, as it seemed to be divided by four furrows, it was concluded, that it consisted of four different parts. Upon endeavouring to cut into the part which first presented itself at the navel, it was found that a knife could not penetrate it. A

saw, therefore, was employed, as it was concluded to be of a bony consistence. This was found to be really the case, and, when it was opened, it exhibited a cavity resembling that of a human skull. This cavity contained about a pound and a half of a viscid fluid. The inner, as was all the outer side of this tumour, was lined by a membrane. Opposite to the navel, when it was first opened, the bone was about the thickness of a finger breadth. But towards its base, at the loins, it was of the thickness of two fingers breadth and a half. Where it had the appearance of bone, it was of a spongy texture. But as it extended upwards to the diaphragm, it became gradually softer, and seemed, at last, to be of a schirrous nature. From attentively considering its origin, it appeared to be a tumour of the mesentery.

The second tumour much resembled the former; but it was schirrous only, and had no where assumed the consistence of bone. It was joined to the other about the right hypochondrium, and occupied the seat of the liver and stomach. As well as the former, it likewise formed a cavity containing upwards of two pounds of fluid. Its cortical substance was about two fingers breadth in thickness.

The

The third tumour was also of a schirrous nature. It was less than the former, and united so closely to the left kidney, that they could not be separated without great difficulty. This kidney was at the same time diminished to half the size of the right one.

The fourth tumour was of the same nature as the two former. It was almost totally situated in the thorax, and was joined to the upper part of the great bonny one.

The length of these four tumours, taken altogether, was thirty-four inches; their depth twenty-four inches; and the weight of the whole was thirty-two pounds.

The author thinks it needless to give any account of the carious ribs and vertebrae, and other morbid appearances common in the rickets, which were also to be met with in this case. He next proceeds, therefore, to consider the cause of the rickets; and, on this subject, he adopts the opinion of Boerhaave, who thought that our aliment, part of which is of an ascessent nature, is not fit for the purposes of nutrition and growth, till it has acquired an alkaline tendency. To this opinion, he more readily assents, as it seems to a-

gree with the experiments of Ruyfch, who found that alkalines preserved the hardness and solidity of the bones, but that acids rendered them more soft and flexible. Since, therefore, the rickets proceed from weakness of the bones, and laxity of the ligaments, giving rise to distortions, he thinks it evident that this disease must be ascribed to acidity in those humours which nourish the bones.

He next observes, that it will not be improper to inquire in what manner the bones are nourished. He totally denies that they receive their nourishment through bonny canals, unless it may be allowed, that something of this kind takes place with children, whose bones being softer, may be nourished differently from those of adults. He farther adds, that he could never find any glandular substance, which, as has been asserted by some, could assist in the nutrition of the bones. He is of opinion, that the nutrition of the bones is to be referred to their membranes alone. In support of this opinion, he adduces the dissection of the leg of a man who died of a fever, soon after he had recovered from a fracture of the tibia. In this case, he found that the re-union of the bones had been effected by a callus, produced from the
periosteum

periosteum, and that the fractured ends remained perfectly distinct.

The author next enumerates several phaenomena, which he has observed with respect to the bones of rickety patients. He informs us, first, that the bones are almost always bent, where they receive the greatest number of arteries. *2dly*, That these arteries dilate when they enter the bones, and are again constricted immediately after they have entered them. *3dly*, That the holes and cells in the concave part of the bones are filled with blood. *4thly*, That these cells are in general deprived of periosteum; but, where any can be found, it is observed in an ulcerated state. And, *lastly*, That the convex part of the bones is in no degree altered from its natural shape, except in being bent.

In the conclusion of this paper, we are presented with some observations on the cure of the rickets. Here, our author, in general, approves of the medicines which have been commonly prescribed. But he objects to the ordinary method of applying emollients, corroborants, and supports to the affected bones. He advises, that corroborants and supports should be applied to the concave part of the bones, as being princi-

pally weakened; but that emollients should be applied to the convex part, as he considers them to be preternaturally hardened.

X.

Johannis Babtistae Gaber *De Humoribus Animalibus Specimen tertium. Vid. Melanges de Philosophie et de Mathematique de la Société Royale de Turin.* Tom. 3. 4to, Turin.

MR GABER, who had before written two dissertations concerning animal fluids, here presents us with a third upon the same subject. In the prosecution of his experiments on the spontaneous changes of these fluids, he was induced to employ them in several states, in which they naturally appear. Accordingly, the experiments here related, were made on that part of the blood which is commonly called the membrane of Ruysch, on the flocculi afforded by blood discharged from a vein into warm water, on the fibrous base of the crassamentum, and on the essential salt of the blood.

By

By the help of cold, he separated the coagulable and aqueous parts of the serum. These he found nearly equal. The first, by digestion in close vessels, exhibited a purulent sediment, surrounded by a very small quantity of water. The last had all the properties of an aqueous fluid.

The pleuritic crust of the blood, dissolved by volatile alkali, was restored to its natural state by the addition of nitrous acid. But it was reduced to a gelly only, by the admixture of water. From this, our author concludes, that, by solution with the alkali, it does not assume the nature of a soap. The tender consistence which it acquires in the last case, he ascribes to a part of the water still remaining in its pores. The acid, however, restores it to its proper consistence, as it is capable of attracting both alkali and water.

The next experiments he made were with that fabulous matter which the purulent sediment of the serum, in process of time, deposits. This, he found, could not be dissolved by water, spirit of wine, or distilled vinegar; but it was readily and perfectly dissolved by the acid of nitre and volatile alkali. From these trials, he concludes, that this fabulous matter does not consist either of saline particles, or of the coagulable
part

part of the blood; and that it differs from biliary and urinary calculi, and from gouty tophaceous concretions.

The pleuritic crust of the blood, when kept for a long time, was melted down into a turbid fluid, which yielded a sediment, agreeing exactly, in chemical properties, with the fabulous matter employed in the experiments mentioned above. From this, our author concludes with Sauvages, De Haen, and Quesnay, that this crust, although very dissimilar in appearance, is the same with the coagulable part of the serum.

When, by repeated lotions, the red part was washed away from the crassamentum of the blood, what remained had precisely the same appearance as the pleuritic crust. And, upon trials with Alcohol, Mineral Acids, and Volatile Alkali, it was found to possess the same chemical properties. Hence he concludes, that these two substances are in reality the same; and, upon this foundation, he explains many phaenomena which have been observed with respect to the pleuritic crust.

The crassamentum of the blood, unwashed, was hardened by acids and alcohol; but it was
not

not dissolved by volatile alkali, From this Mr Gaber concludes, that the red globules prevent the action of volatile alkali upon the coagulable lymph.

Blood flowing from a vein into water forms flocculi. These Mr Gaber found to be of precisely the same nature with the pleuritic crust of the blood, and the coagulable part of the serum. He farther found, that the coagula formed by shaking blood, which, in general, pass by the name of membrana Ruyschiana, were likewise of the same nature. Hence he deduces the reason why blood on agitation gives no pleuritic crust; the matter of which it should be formed being there converted into the membrana Ruyschiana.

He next proceeds to account for the mistakes of some authors, who have represented these coagula as soluble in spirit of wine. This, he thinks, must have happened, either from their using a weak spirit, or carelessly allowing putrefaction to come on. With respect to the action of fixed alkalines on these coagula, he found, that oleum tartari per deliquium hardened them as much as spirit of wine; and that this hardness remained, although they were subjected to digestion.

It

It has long been a subject of dispute, whether fixed and volatile alkalies be of a septic or antiseptic nature. This question, our author imagines, may with certainty be determined from the facts above narrated. He points out the fallacy of judging concerning this subject from the odour emitted. But, as it is the property of putrefaction, to melt the serum, and to destroy its coagulable nature, he imagines, that, upon this ground, the question may be determined. The influence of the fixed alkali in hardening the coagulable lymph puts, he thinks, its antiseptic nature beyond all doubt. He is of opinion, that volatile alkali is likewise antiseptic. For, although it does dissolve the coagulable part of the blood; yet the disposition to coagulate is evidently not lost, but is recoverable upon the abstraction of the alkali.

He next endeavoured to determine the action of quick-lime upon the inflammatory crust of the blood, and other coagula of the same nature. He found that it quickly reduced them to a state of gelly, and afterwards perfectly dissolved them. But, upon the addition of aqua fortis, they were again restored to their former consistence and colour.

The

The author next gives us an account of some trials which he made, with a view of obtaining the essential salt of the blood. This he first attempted, by separating the watery from the coagulable part, in consequence of congelation ; and afterwards the saline from the watery, by means of fire. But, in this way, he could obtain no salt. He then put a quantity of serum into boiling water, which turned the whole to a milky colour. The watery part, in this case, obtained by straining through paper, acquired, upon evaporation, a very salt taste ; but, when it was allowed to cool, no crystals could be found in it. From this, Mr Gaber concludes, that the native salt of the human blood never crystallizes without great difficulty.

This paper is concluded with some experiments on animals killed by heat and inanition. By many, it has been imagined, that, in such cases, animals die in consequence of putrefaction. The author's view was to determine this question.

Three rabbits were killed by being kept for several hours in a degree of heat, from ninety-eight to a hundred, in Fahrenheit's thermometer. Upon examination, their lungs were found inflamed; but no foetor or any other mark of putrefaction could be discovered ; nor did their blood or bile
 effer-

effervesce upon the addition of acids. From this, our author concludes, that those who, in such cases, have found marks of putrefaction had left the bodies in the heat, in which they were killed, for some hours after death.

A rabbit, after being kept twenty-one days without meat, died from hunger. Upon examination, no signs of putrefaction could be discovered; nor did its fluids shew any effervescence upon the addition of acids. Mr Gaber observes, however, that authors, of undoubted credit, have asserted a contrary result from similar experiments. This, he imagines, may be accounted for, from their experiments being made on carnivorous animals. Or, he thinks, it may be ascribed to the animals they employed being exposed to causes of putrefaction, previous to their experiments.

XI.

Account of an extraordinary steatomatous Tumour in the Abdomen of a Woman, by P. Hanly, M. D. Vid. Philosophical Transactions, Vol. 61. 4to, London.

A woman of a healthy constitution, in the thirty-sixth year of her age, and fifth month of her pregnancy, became sensible of an uncommon lump in the region of her stomach, which felt to be about the size of a hen's egg. It gave her little pain or uneasiness of any kind for some time after she perceived it; but, towards the end of her pregnancy, she became much emaciated, and was frequently troubled with reachings and vomiting. On the 23d of May, 1770, she was delivered of a strong healthy child. Three days after this, the tumour being much encreased in size, and the reachings becoming more violent, she sent for Dr Hanly. Upon examining her abdomen, he felt a large tumour under the muscles and peritoneum, extending obliquely from the stomach towards the right umbilical region. He could

could plainly distinguish on its surface firm protuberances, of different dimensions, which seemed to resemble the head and superior extremities of a foetus. It readily admitted of motion from side to side; but every attempt to move it downwards was resisted, and occasioned considerable uneasiness to the woman.

The weakness of this patient, and the uncertainty with regard to the nature of the tumour, induced the Doctor to delay giving any deobstruent medicines till her strength should be recruited. Meanwhile, with a view to obviate symptoms, he put her upon a course of bitters and absorbents, and enjoined her not to suckle her child. The woman's poverty not admitting of her compliance with the latter part of the advice, she soon became very greatly exhausted, and was, in a fortnight after delivery, seized with a hectic fever, attended by the usual symptoms of atrophica; small quick pulse; loss of appetite; and night-sweats. In the mean time, the tumour continued to increase in size. Dr Hanly then carried along with him ten other physicians, surgeons, and accoucheurs, to examine it. They were all of opinion, that it was an extra-uterine foetus, the head, trunk, and extremities of which
they

they imagined, they could distinctly feel. They determined, however, to leave the event to nature, rather than to perform the Caesarean operation, which they were convinced the woman had not strength enough to undergo.

In this condition she continued to languish under acute pain, and an encrease of hectic symptoms, till about the end of July. A fluctuation of water was then perceived in her belly, and soon after, her legs became oedematous. From this time opiates were frequently employed, and procured her a temporary relief; but the tumour, weakness, and other symptoms, daily encreasing, she died on the second day of September.

Upon dissection, there was found in the cavity of the abdomen, a tumour, about seven inches in length; near five in breadth, from the sternum towards the spine; and about three in thickness. It adhered above to the anterior part of the stomach, and below, to the right ovarium. It greatly compressed the colon, anterior lobe of the liver, and small intestines, the greatest part of which it had forced over to the left side. It was of the steatomatous kind, and about the consistence of tallow, but harder before than behind.

It appeared to be divided by thin membranes into cells, distended with a fatty matter, of different degrees of hardness. It weighed seven pounds, and was of an irregular figure, full of prominences of various dimensions. From its fatty cellular appearance, Dr Hanly considered it to be a production and distension of part of the omentum.

XII.

Experiments on Putrefaction ; by F. L. F. Crell, M. D. Professor of Chemistry at Brunswick. Vid. Philosophical Transactions, Vol. 61. 4to, London.

DR CRELL sets out with observing, that, from the ingenious labours of Sir John Pringle, Mr Gaber, and Dr M'Bride, much knowledge has of late been acquired concerning putrefaction. He considers it, however, as a subject which, as yet, is by no means exhausted. And here he presents us with several experiments, from which he deduces conclusions, in some respects

spects different from the opinions of the two gentleman last mentioned:

Mr Gaber allows that a volatile alkali is produced by putrefaction; but, as he could not discover it in the beginning or the end of the process; he denies its existence in these states; and concludes, that it is not a necessary product of putrefaction. From the smell constantly emitted by putrid matter, Dr Crell was inclined to be of a different opinion. This question; therefore, he endeavoured to ascertain by experiment. With this view, he presents us with the particular detail of two experiments, from which appears; that a volatile alkali is present as long at least as a putrid smell continues; and that it is the basis of this smell.

If however, it be allowed, that volatile alkali is essential to putrefaction, or, at least, is always present, he is of opinion, that alkalines can never be used, with the living body, as antiseptics; on the contrary, he alledges, that the most powerful remedies which can be employed, with this intention, are acids. He observes, however, that Dr M'Bride is of a different opinion, in support of which he has adduced the three following arguments. 1st, That acids, when applied un-

changed to the absorbent vessels, will not be taken up by them. *2dly*, That, if we suppose them to be taken up, they would be highly dangerous. And, *3dly*, That in reality they are changed before they leave the *primae viae*. To the first of these our author replies, that, as metallic salts are evidently absorbed, he does not see why the same may not hold of simple acid. With regard to their pernicious effect, he alledges, that the experiments upon which Dr M'Bride founds this opinion, will by no means apply to the living body. And, in answer to the last, he adduces an experiment to prove, that acids, although so far changed in the elementary canal, as not to effervesce with alkalines, may, notwithstanding, check putrefaction. He concludes, therefore, that, in putrid diseases, their use is of great consequence, and ought never to be omitted.

XIII.

XIII.

Genera of Birds. 8vo, Edinburgh.

FOR the work now before us, we are indebted to that eminent naturalist Mr Pennant. It may be considered as a very proper sequel to the Synopsis of Quadrupeds, with which he has already favoured the world. The author is far from assuming to himself the entire merit of this new arrangement. He offers it, principally as an improvement of what had before been done upon this subject by those celebrated writers, Ray and Linnaeus. In the preface we are presented with an explanation of the terms used in ornithology, to which are subjoined some observations on the flight, nuptials, nidification, and eggs of birds.

After this preface, we are presented with a table of Mr Pennant's arrangement. To his own orders and genera are annexed the correspondent ones in the Systema Naturae of Linnaeus.

He follows Ray in classing all birds under the two great divisions of Land and Water-fowl.

In his subdivision of these classes into orders, he pretty nearly follows Linnaeus. The division of land-birds comprehends six orders; four of which are taken from Linnaeus, two are new orders. These are the Columbine, comprehending one genus, taken from the Passeres of Linnaeus; and the Struthious, comprehending two genera; the one taken from the Gallinae, the other from the Grallae of Linnaeus. Of the water-birds, he forms three orders. 1. The Cloven-footed, which, except the Pratincole, all belong to the Grallae of Linnaeus. 2. Those with pinnated feet, taken from the Anseres and Grallae. 3. The Web-footed, taken from the same orders.

Each of the nine orders comprehended under the two general divisions, is next considered separately. In doing this, he does not give any character of the order, but proceeds immediately to treat of the genera which it contains. In considering each genus, he has followed pretty nearly the same plan. First, he gives the character of the genus, then quotes some standard plate in which a good example of it may be found; and, in general, concludes with a short history of it; mentioning, at the same time, the correspondent genus

nus in Linnaeus, Ray, and Briffon; together with the number of species it contains. His characters of genera are, for the most part, taken from Linnaeus. On some occasions, however, he differs from him; but, where he has done so, reasons are assigned for it in the preface. These reasons, while they appear satisfactory, at the same time, shew the great deference which our author entertains for the opinion of the Swedish naturalist.

N 4

S E C T.

S E C T. II.

Medical Observations.

I.

A Case of Epilepsy, with an Account of the Appearances upon Dissection; by Dr Daniel de la Roche Physician at Geneva; communicated to Dr Cullen.

A Girl, when about eight years of age, was seized with epilepsy. The fits succeeded each other at intervals of three, six, or eight weeks. After it had continued in this way for a considerable time, she was attacked with a putrid fever, from which her life was thought to be in imminent danger. During the continuance of the fever she had no epilepsy; nor did any fit of it return for twenty-two months after her recovery from the fever. But, at the end of that time,

time, she was seized with a long and very severe one. Fourteen months after, she was attacked with a second. These were succeeded by others recurring at intervals, gradually becoming shorter. Last summer, I was called to attend her. The fits then succeeded each other at intervals of about six weeks. The convulsive motions during the fit had always affected the right arm more than any other part of the body. About two years before I saw her, it began to be weakened, and at last she lost entirely the power of it. To the feel, it was considerably colder than the left. I attributed this paralytic affection to the atonia which the convulsions had left behind them. I thought, therefore, that, if the primary disease could be removed, this palsy might easily be cured by means of tonics and stimulants.

Many physicians had been consulted on this case, and they differed much in their opinions with regard to its cause. Some of them ascribed it to a disorder in the hypogastric region, others to worms, and a third set to some obstruction. I gave it as my opinion, that the seat of the disease was in the head, and that the remedies were to be directed there. Accordingly, I ordered a blister to be applied to the back part of the head and neck.

neck. This was done at the space of five weeks from the time at which she had been attacked with the preceeding fit. It seemed to have some effect, as the next fit did not recur till seventeen days after it had been applied; and was at the same time less severe than the preceeding one. I ordered her nothing for three weeks after this. Then, however, I applied another blister, with half only of the usual proportion of cantharides. I ordered, that this blister should be so large as to cover the whole head, and that it should be kept open for three or four days. This was accordingly done, and it discharged plentifully. A few days after it was healed, I applied another blister to the same part, which was managed in the same manner with the preceeding one. This method I continued for more than six weeks. I then determined to abstain from blistering for some time. But, about ten days after the healing of the last blister, and, after an interval of eleven weeks from the time of the preceeding fit, she was seized with one which ended in death.

Upon dissection, I found about twelve ounces of water in her head; part of which was contained in the ventricles of the brain, and the rest in bags,

bags, formed by a lengthening of the anterior ventricles. These bags reached the dura mater, with which they were in contact about an inch above the frontal sinus. Every other part of the body was found perfectly in its natural state. It may be remarked that this hydrocephalus was attended with none of those symptoms so accurately enumerated by Dr White. This patient was neither affected with headach, vomiting, nor slow fever. It may, I think, be a question, Whether the hydrocephalus was the cause of the epileptic fits, or merely a concomitant effect? I am inclined to the latter opinion; but I think it probable, that the compression it occasioned produced the palsy in the arm,

II.

The Case of a Man affected with an obstinate Epilepsy, considerably relieved by the Use of the Flowers of Zinc, by Mr Benjamin Bell Surgeon in Edinburgh.

A man aged 35, about ten years ago, was seized with epileptic fits, which have continued to recur from time to time ever since. For some time after the first attack, they did not recur oftener than once a month. By degrees, however, they became more frequent; of late, they have seldom left him an interval of twenty-four hours; and, in general, in that space of time, he has six, eight, ten, or even twelve attacks. During the fit, he is altogether insensible, is convulsed, and foams at the mouth; and, upon recovering from it, he is so much enfeebled, that he can hardly speak. For some time, his fits were not very severe; but as they became more frequent, so they became more violent and of longer duration. At length, his memory and judgement were so much impaired, that he could scarce an

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swer any one question distinctly, which still continues to be the case. About four years ago, as his fits were becoming more severe, he was seized with violent rheumatic pains in his limbs. These after some time went off; but they left such weakness and feebleness of his under extremities, that, for these three years past, he has not been able to get out of bed, without the assistance of two or three people. His appetite is good, belly regular, and pulse seventy-two.

In this situation, I found him, when I first visited him on the 22d of October 1772. He had before that used a great variety of medicines, without any effect. I therefore determined to make a trial of the flowers of zinc, which I ordered in the following form. *R. Flor. zinci gr. xxiv. Extract. Gentian. ʒi, M. f. mas. et divid. in pil. xxiv. cap. i. m. v.* He continued to take two pills a-day, till the 1st of November. As they produced no sensible operation, and as his fits continued as violent and as frequent as formerly, I ordered that his dose should be doubled. At this dose, he continued till the 12th; his fits, though no less violent, were then less frequent than before. I desired, therefore, that he might take three pills in the morning, and as many in the evening. On the

the 20th, his fits continuing still less frequent, I augmented his dose to four pills. I did not see him again till the 29th, during that time, his pills, by accident, had been intermitted for two days, upon which his fits became evidently both more frequent and more violent, and continued so for some days after. As he had never yet found any inconvenience from the zinc, I now ordered the dose to be encreased to five pills, and repeated thrice every day. On the 12th of December, I found that he been entirely free from fits since the second day after he began this large dose. As he found no inconvenience from the zinc, I encreased the dose to six pills. On the 18th, he still continued free from any fit, found himself much more clear and distinct than formerly, and was able to give tolerable answers to any questions that were put to him. On the 22d, he still continued much better, and was able to remember every thing that happened to him. He had likewise, in a considerable degree, recovered the use of his limbs, in so much, that he was able to get out of bed with the assistance of one person only; whereas, formerly, two or three had been required. I then ordered his dose to be augment-

On the 29th, he was again free from fits, and continued so till the 31st.

ed to seven pills thrice a-day. On the night of December 26th, he had one fit during his sleep; but it was so slight, that, if he had not been informed of it by those who attended him, he should not have known it. I then ordered his dose to be augmented to eight pills. Notwithstanding this, he had one fit during the night of the 27th, and two during that of the 28th. None of them, however, were severe, and his intellectual faculties still continued to alter for the better. On the nights of the 29th, 30th, and 31st, he still continued to have one or more fits. On the 1st of January 1773, therefore, I ordered his dose to be augmented to ten pills. After this, his fits stopt again. On the 20th, I ordered his dose to be augmented to twelve pills, and he continued free from fits till the evening of the 24th, when he had a pretty severe one. For the five following days, he had two or three every night; but his memory and judgement remained unaffected by them. I ordered him still to continue with the former dose of the zinc. From the 29th of January to the 12th of February he had no fits. I then ordered his medicine to be discontinued, after a trial of upwards of four months. He remained free from fits, till the 18th, on the night of
of

of which he had two pretty severe ones. After this, he had two or three every night till the 23d. Since that, he has had none, and continues this day, March 2. in every respect much better than before he began the zinc. I now intend intermitting the use of this remedy, till I shall be able to judge, how far the relief he has obtained may be reckoned permanent.

III.

An Account of the Appearances upon the Dissection of a Man, who died of a Hydrothorax, in the Royal Infirmary, at Edinburgh; from the Journal of that Hospital.

A Man about sixty years of age, was admitted into the Royal Infirmary, on the 28th of December 1772, with evident symptoms of Hydrothorax, and considerable anasarcaous swelling of his legs. Several remedies were tried in vain. His pulse became gradually small, weak, and quick; his stomach unable to bear either medicines or food; and he died about the twelfth day after his admission. The appearances upon dissection were as follows.

Upon removing the integuments of the abdomen, no water was found in the cavity,
but

but some of the viscera were a good deal displaced. The liver descended much lower than is common, and its attachment to the diaphragm could be distinctly perceived below the cartilages of the ribs. The diaphragm itself hung down on the right side in the form of a bag, and evidently appeared to contain a fluid. The other viscera were displaced by this descent of the liver; the stomach particularly was pushed greatly towards the left side; and its oblique direction so much increased, that the pylorus lay almost opposite to the navel. Some small glands upon the mesentery were found schirrous; the other viscera of the abdomen were in a sound state.

Upon laying open the thorax, the lungs were found in a natural state on the left side, and there was no water in the cavity. But the lungs of the right side were diminished to a very small size, and the cavity was filled with a dirty whitish coloured liquor, to the quantity of some quarts. The pleura of the right side was much thickened. The pericardium was unusually large, and contained a considerable quantity of a fluid, not of the natural appearance of the liquor pericardii; but of the same dirty whitish colour with the water in the cavity of the thorax.

VOL. I.

O

S E C T.

S E C T. III.

Medical News:

ON the tenth of February last, died at Edinburgh, Dr John Gregory. He was at that time Professor of the practice of Physic in the university of Edinburgh, fellow of the royal college of physicians there, fellow of the royal society at London, and first physician to his Majesty for Scotland.

Dr Gregory was born in the end of May 1725. His father was professor of medicine in King's college Aberdeen; and his grandfather was professor of mathematics, first at St. Andrews, and afterwards at Edinburgh. Thus Dr Gregory was the third professor of his family in

in a lineal descent. But it deserves to be remarked as a circumstance still more extraordinary, that, from his great grandfather, David Gregory, Esquire, of Kinairdy, in Aberdeen-shire, he was the fifteenth descendant, who had held a professorship in a British university.

Dr Gregory began the study of medicine at Aberdeen, which he afterwards prosecuted, first at Edinburgh, then at Leyden, and lastly at Paris. In the twentieth year of his age, he was elected professor of philosophy in King's college Aberdeen, and had, at the same time, the degree of doctor of medicine conferred upon him. In the year 1756, upon the death of his brother Dr James Gregory, who had succeeded his father as professor of medicine, he was elected to that chair. But, about the beginning of the year 1765, he left Aberdeen, and came to Edinburgh. Soon after this, he was appointed professor of the practice of medicine in the university there, in the room of Dr Rutherford, who resigned in his favour. The year following, upon the death of Dr White, he was nominated first physician to his majesty for Scotland. Thus, at the time of his death, besides very extensive practice, he enjoyed the highest and most impor-

tant offices in the way of his profession, which could be obtained in his native country.

These distinguishing honours were universally allowed to be the just reward of singular merit. Of this the writings which he published will bear ample testimony to future ages. His first publication, which is entitled, *A comparative View of the State and Faculties of Man with those of the Animal World*, made its appearance in the year 1765. This production, while it demonstrates the author to have been a philosopher, whose reflections were just and original, at the same time, displays a liberality of sentiment seldom to be equalled. Such was the avidity with which it was read, that, in the space of two years, it went through four editions; and, while it was perused by all, with peculiar pleasure, it was honoured by those distinguished for taste and literature with high approbation.

In the year 1770, a second work of Dr Gregory's made its appearance; but without his consent, and even contrary to his inclination. His preliminary lectures on the practice of physic were heard by his pupils with universal satisfaction. From a copy of these lectures taken in short hand, there was published a book entitled, *Observations on the Duties and Offices of a Physician, and on the Method*

Method of prosecuting Inquiries in philosophy. Although these lectures were not intended for the press, and did not pass thro' the finishing hand of the author before they were presented to the public; yet, such was the matter they contained, that, had they appeared even in a much worse dress, they could have done him no discredit. In these lectures, by the most forcible arguments, he laboured to convince his pupils, that a physician, who studies the principles of his profession, who has an extensive acquaintance with every branch of natural knowledge, and who properly applies his knowledge, must have an infinite advantage, as a practitioner, over one who is ignorant of the theory of medicine, and of every science connected with it. He endeavoured to persuade them, that genius and sense, which indeed are the peculiar gifts of heaven, are yet capable of high improvement; and that, without improvement, they can be but of little account, either to the public, or to the individual. In short, no argument was omitted, which could prompt them to study medicine with attention and ardour, and afterwards to practise it with prudence and humanity.

Dr Gregory, however, was dissatisfied with the dress in which this work appeared. Soon after,

therefore, he published an edition of it himself, in which his former sentiments are set off with all the advantages which can be derived from a correct and elegant stile.

His last publication, *Elements of the Practice of Physic*, was intended as a syllabus to his lectures; and in it he meant to have comprehended all the diseases of which he usually treated. But, not having leisure to finish the whole, he was obliged to stop at the end of those diseases commonly reckoned febrile. Although this work appears with all those disadvantages under which every text must labour; yet it sufficiently shews how the author thought and acted in the exercise of his profession.

Had Dr Gregory lived to a more advanced age, the world would probably have been favoured with other works no less honourable to the author than beneficial to mankind. But his extensive practice, and his zeal in the discharge of his duty as a professor, occupied the greatest part of his time.

To pretend to enumerate the many advantages, which his pupils derived from him in the capacity of a teacher, would exceed the bounds of our publication. Let it suffice to say, that, from the
extent

extent of his views, from the justice and importance of his observations, and from the force and accuracy of his reasoning, every hearer obtained the most thorough conviction of his abilities, and retired from academical labours both pleased and instructed.

To conclude, Dr Gregory was not more eminent as a physician, than he was amiable and respectable as a man. With the mathematical genius of his family, he united a correct taste for the fine arts, and a high relish for every social virtue. He possessed a clear and vigorous understanding; a chaste and lively imagination; an affectionate and feeling heart. And, while he was distinguished for paternal and conjugal attachment, he was a constant friend to poverty and distress; an unwearied patron of science and of virtue.

On Wednesday the 24th of February Dr William Cullen was unanimously elected professor of the practice of medicine, in the university of Edinburgh, in the room of Dr Gregory; and, soon after, he was appointed by his Majesty to succeed the same gentleman as first King's physician for Scotland.

Mr Hamilton McLure and Mr Thomas Hay were lately admitted members of the college of surgeons at Edinburgh.

Mr Portal, at Paris, in a letter to Dr Hamilton physician in Edinburgh, mentions, that of late he has frequently employed an infusion of Marubium album, with great success, against obstructions of the liver.

The following uncommon accident lately happened at Edinburgh: A gentleman about fifty years of age was thrown down with considerable force upon the floor of his own bed-chamber. He pitched upon his shoulders, and being remarkably round shouldered, his head was jerked suddenly backwards, but did not touch the floor. He was instantly seized with a general paralysis over his whole body, upon which Mr Alexander Wood was immediately sent for, and Dr Monro was soon afterwards called in. They found him with all his senses, except that of feeling, perfectly entire; but he was totally deprived of the power of motion; and he had little sensation upon any part of the trunk of his body being touched. His voice was in no degree affected; respiration went on as usual; and he complained only of a slight pain in the back part of his neck. In spite of every remedy which could be employed, his paralytic symptoms continued, a lethargy supervened, and he died within a few
minutes

minutes of twenty-four hours from the time of his fall.

Upon examination of the body after death, the third vertebra of his neck was found fractured; but the spinal marrow did not seem to be hurt, and its membranes were not in any degree torn. Every other part which was examined was perfectly found.

SECT.

S E C T. IV.

A List of New Books.

L Ectures on the Materia Medica, as delivered by William Cullen, M. D. professor of medicine in the university of Edinburgh; now published by permission of the author, and with many corrections from the collation of different manuscripts, by the editors, 4to, London.

Considerations on the use and abuse of antimonial medicines in fevers, and other disorders, 8vo, London.

En essay on the nature and circulation of the blood, in two parts. 1. On its nature and uses. 2. On its circulation. By Marmaduke Berdoe, M. D. 8vo, London.

Experiments and observations on the preparation, calcination, and medicinal uses of Magnesia Alba, &c. By Thomas Henry, 8vo, London.

Essays medical and experimental. Vol. 2. By Thomas Percival, M. D. F. R. S. and S. A. 8vo, London.

Experi-

Experiments on the human bile, and reflections on the biliary secretion, with an introductory essay. By James Maclurg, M. D. 8vo, London.

Notes on Mr William Bromfield's two volumes of chirurgical observations and cases, with an appendix addressed to Dr Lawrence. By D. A. S. M. D. and professor of surgery, 8vo, London.

A dissertation on consumptions, with a rational and practical method of cure proposed, addressed to all invalids, as well as young physicians, surgeons, and apothecaries, 8vo, London.

Histoire universelle et raisonnée des vegetaux présentés sous tous les aspects possibles. Par M. P. I. Buchoz. Doct. en med. et phil. Botaniste de Mgr. le Comte de Provence.

Digressions academiques, ou essais sur quelques sujets de physique, de chymie, et d'histoire naturelle. Par M. Guyton de Morveau Avocat-General au parlement de Dijon, &c. 12mo, Dijon.

Traité analytique des eaux minerales en general, de leur propriétés, et de leur usage dans les maladies, fait par ordre du gouvernement. Par M. Raulin, M. D. agrégé honoraire au college royal des medecins de Nancy, &c. 12mo, Paris.

Danielis

Danielis Wilhelmi Trilleri Opuscula medica ac medico-physiologica. Tom. 3tius, Francfort.

A practical treatise on diseases of the breasts of women. By W. Rowley, surgeon and man-midwife, and surgeon to St John's Hospital, 8vo, London.

Doubts concerning the inversion of objects on the Retina. By Marmaduke Berdoe, M. D. 8vo, London.

Genera of birds. By Thomas Pennant, Esq; 8vo, Edinburgh.

The London practice of physic, the 2d edition, with additions, 8vo, London.

A new practical essay on Cancers. By J. Burrows, M. D. 8vo, London.

Observations on the diseases in long voyages to hot countries ; and, particularly, on those which prevail in the East Indies. By John Clark, formerly surgeon of the Talbot, East Indiaman, 8vo, London.

A course of physiology, divided into twenty lectures, formerly given by the late learned Doctor Henry Pemberton, professor of physic at Gresham College, fellow of the royal society, and of that at Berlin ; now first published from the author's manuscripts, 8vo, London.

A philosophical essay on man. Being an attempt to investigate the principles and laws of the reciprocal influence of the soul on the body. 2 vols. 8vo, London.

Serious considerations on some remarkable passages in a work lately published by Mr B——, and presented to his Majesty, 8vo, London.

Memoires de l' academie royale des sciences de Stockholm, concernant l' histoire naturelle, la medecine, l' anatomie, la chymie, l' économie, les arts, &c. Traduits par M. de Keralio, Chevalier de l'ordre royal et militaire de St Louis, &c. 4to, Paris.

Antiquitates medicae selectae, auctore M. Walch senior, 8vo, Paris.

Traite d'Odontalgie, ou l'on présente un système nouveau sur l'origine et la formation des dents, une description des différentes maladies qui affectent la bouche, et les moyens de les guerir. Par M. Auzebi chirurgien dentiste à Lyon, 12mo, Lyon.

Introduction à l'étude des corps naturels tirés du regne vegetal, par M. Bucquet Docteur-regent de la faculté de medecine de Paris, 2 vols, 12mo, Paris.

Differta-

Differtazione sul l'aneurismo del poplite, par
M. Maffotti chirurgico del Grande Duca di Tos-
cano, 8vo, Florence.

Giornale di Medicina. Tom. 10. 8vo, Venise.

Steins anleitung zur Geburthshulf, &c. i. e. A
practical introduction to the art of midwifery in
praeternatural and difficult labours. By Mr
G. G. Stein. Cassel.

Joannis Jacobi Reichard, Flora Francofurtana, e-
numerans stirpes circa Francofurtum nascentes,
secundum methodum sexualem dispositas—
Francfort sur le Mein.

J. Mich. Aug. Jagemann in acad. Erford. phil.
prof. liber epidemicorum, de acuta passim epide-
mica febre circa annos 1771 et 1772—
Erford.

Reflections sur le triste sort des personnes, qui
sous une apparence de mort ont été enterrées vi-
vantes, et sur les moyens qu' on doit mettre en
usage pour prevenir une telle mefeprise, 8vo, à la
Haye.

Novi commentarii academiae scientiarum Im-
perialis Petropolitanae, Tom. 15. pro anno 1770,
4to, Petropoli.

Observata quaedam medica, cum figuris aeneis,
auctore M. J. Marx, M. D. Berlin.

Auzuge

Auzuge aus den neuften differtationen. i. e. Extracts from new theses and differtations on natural history and medicine. By Mr E. G. Baldinger. Berlin.

Gedaken und Mahrenhumg, &c. i. e. Thoughts and observations on the Tarantula for destroying the prejudices entertained with regard to its bite. By Mr Busching. Berlin.

Recherches sur les modifications de l'atmosphère, contenant l' histoire critique du barometre et thermometre ; un traité sur la construction de ces instrumens, et des experiences relatives a leurs usages. Par. M. de Luc, citoyen de Genève, 2. Tom. 4to, á Genève.

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M E D I C A L

A. N D

P H I L O S O P H I C A L

C O M M E N T A R I E S.

By a SOCIETY in EDINBURGH.

So great are the difficulties of tracing out the hidden causes of the evils to which this frame of ours is subject, that the most candid of the profession have ever allowed and lamented how unavoidably they are in the dark.

STERNE.

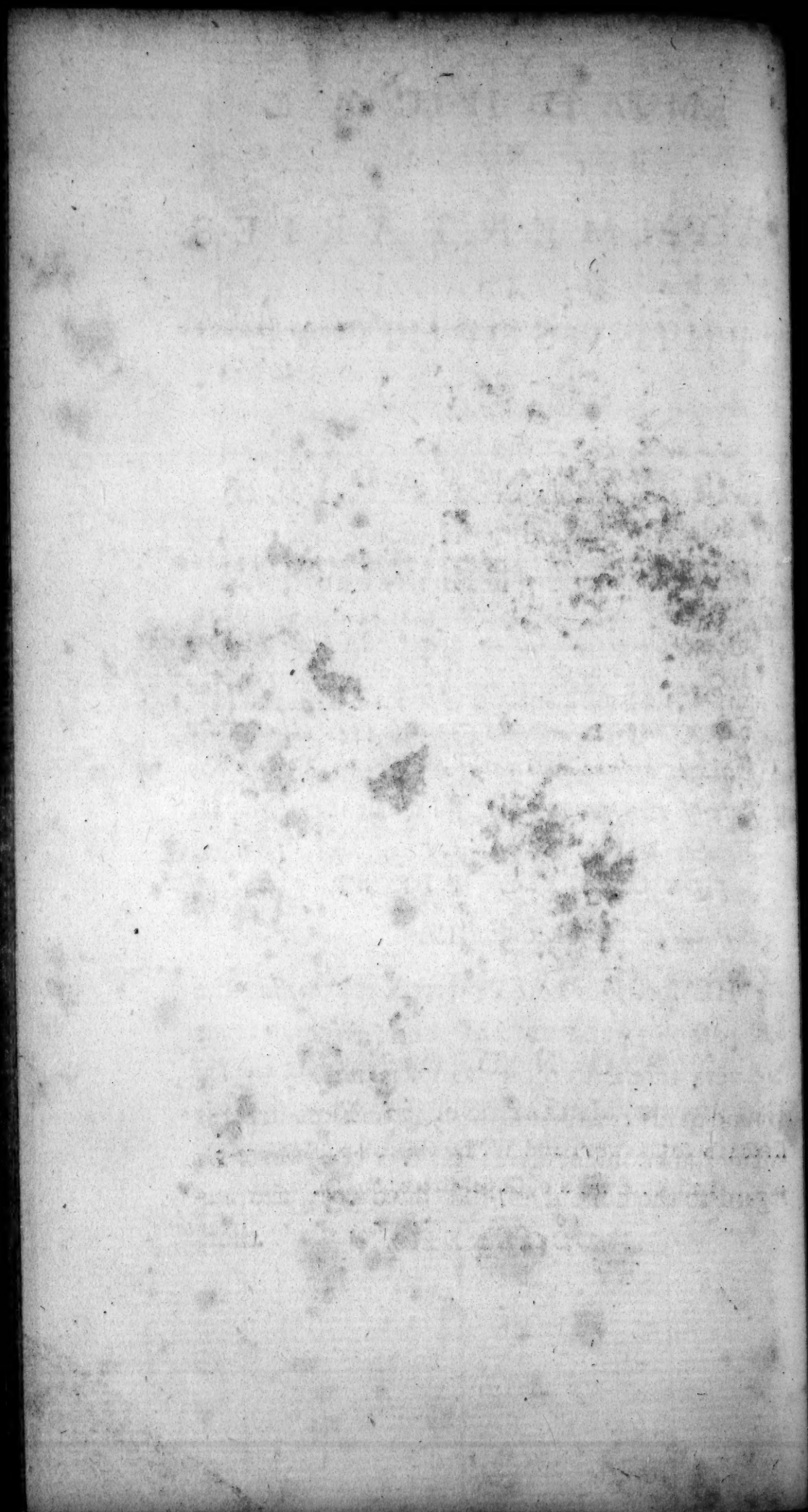
V O L U M E F I R S T.

P A R T I I I.

L O N D O N

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M, DCC, LXXIII.



M E D I C A L
C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

*Practical Observations on the Child-bed Fever :
Also on the Nature and Treatment of Uterine
Hæmorrhages, Convulsions, and such other acute
Diseases as are most fatal to Women during the
state of Pregnancy. By John Leake, M. D.
Member of the College of Physicians, London,
and Physician to the Westminster Lying-in-
Hospital. 8vo, London.*

THE doctrines here delivered, concerning the
pathology and cure of the puerperal fever
are very similar to those lately published by Dr
Hulme in his treatise on the same subject. As this
circumstance might give rise to a question with
regard to the honour of the discovery, the au-

thor, in order to assert his claim of priority, informs us in the introduction, that near three years ago, in a course of public lectures, he had taught those opinions which are contained in the work now before us. In proof of this assertion, he appeals to a number of his pupils, a list of whose names he has annexed in a postscript.

The remaining part of the introduction consists of general observations on the causes of that diversity in opinion which obtains with regard to the origin and cure of diseases, and on the most proper method of conducting medical enquiries, so as to contribute, in the most effectual manner, to advance the science, and to promote the real interests of the profession. What our author points out as the great sources of error and dissension in medicine, are those difficulties which must necessarily attend all inquiries with regard to such subjects as do not fall under the immediate cognizance of our external senses, and a preposterous attachment to system and authority, together with an incorrigible propensity to indulge in conjecture and fanciful hypothesis. To avoid these, he earnestly recommends the most attentive regard to personal observation

servation and experience in every particular relative to the history of diseases.

The author, in his first section, presents us with a history of the puerperal fever. But, being induced to think, from the known influence of certain constitutions of the air on diseases in general, and from repeated observations with regard to puerperal fevers in particular, that women are most subject to them during a particular temperature of the air, to this history he premises a general account of the weather. After describing the disease as it usually appears, he proceeds to consider the different opinions of medical writers with regard to its pathology. Physicians, he tells us, have in general ascribed this fever either to an obstruction or critical metastasis of the milk or lochial discharge, or to an inflammation of the uterus. Van Swieten and Levret are cited as the chief supporters of the former opinions, as Hoffman is of the latter. To those who assign a reflux of the milk as the cause of the child-bed fever, Dr Leake opposes the sudden production of the disease, and the almost instantaneous prostration of strength with which it is often attended. These circumstances, he thinks, can with no appearance of probability be

referred to the absorption of a fluid so mild and balsamic as the milk. He allows indeed that this fluid may be so vitiated as to excite disorder in the system. But this, he contends, happens only in consequence of long stagnation; and that, even then, it is in general soon carried off by diarrhoea or some other critical evacuation, or that it will produce an abscess in the breast: In both which cases the disorder is essentially different from the puerperal fever. He farther urges, that suckling after delivery has not been found of service in preventing the attack of this fever; that, in many cases, he has observed a plentiful secretion of milk till very late in the disease; that, in some few, he has seen the milk in small quantity, or even totally deficient, without any such fever; that, in general, it comes on before there be any want of milk; and that it does not happen to women when they wean their children, which should be the case, if it were owing to a translocation of the milk. A matter resembling milk has indeed been found on the surface of the intestines in some who died of this fever. This, however, Dr. Leake maintains, is entirely produced by the suppuration of the omen-

omentum; and he alledges, that the liquor called *serum lactis*, which is found in the cavity of the abdomen, is either a transfusion of thin pus from the inflamed viscera, or a collection of putrid lymph.

Having thus rejected the opinion of those who consider an obstruction of the milk as the immediate cause of the puerperal fever, the author next endeavours to show, that the supposition of its depending on an obstruction of the lochial discharge is equally exceptionable. This discharge, he observes, although formerly conceived to be highly malignant, is now well known to be in every respect similar to what follows from a rupture of vessels in any other part of the body. At first it is sanguineous; by degrees it becomes more dilute and serous; about the third or fourth day it is somewhat purulent; and soon after it totally ceases. Since in this there is nothing but what is in common to the digestion of every fresh wound, the author thinks it inadequate to the production of puerperal fever. And in this opinion he is confirmed from never having observed any bad consequences attending the greatest varieties of this discharge in point of quantity.

Lastly, Dr Leake contends, in opposition to Hoffman, that the child-bed fever is a disease essentially different from an inflammation of the uterus, the latter being generally attended with headach and delirium, and universally with an intense pain and heat in the uterine region; while, in the former, no such symptoms usually appear.

The opinions most generally received concerning the child-bed fever appearing thus embarrassed with insuperable difficulties, the author proceeds, in the second section, to lay before us his own theory of this disease: And to this he subjoins an account of the most successful method of cure. The proximate cause of this disease he imagines to be an inflammation of the omentum and intestines. The sudden change induced by delivery, in the circulatory system, he considers as a circumstance which necessarily predisposes to abdominal inflammations; and the lax texture of the omentum and intestines he thinks sufficiently accounts for their being most commonly affected. Besides this, the effects of labour-pains, and an unhealthy constitution of the atmosphere concurring with the mobility of the system after delivery, and the other predisposing causes already mentioned, assist in kindling

kindling up this fever. Thus, according to our author, we are to look upon this fever as a disorder purely inflammatory, notwithstanding the putrid symptoms which sometimes supervene. These, he contends, are owing to a morbid translation of matter from the suppurated omentum, and therefore are to be regarded merely as consequences of the original affection.

We are next presented with some practical inferences respecting the cure of this disease, drawn from the preceeding pathological reasoning. He particularly insists upon the propriety of bleeding. Objections indeed, he observes, are commonly made to this evacuation. These, however, he disregards as groundless prejudices, which are contradicted both by reasoning and experience. He maintains, that early and copious bleeding, regulated by the state of the pulse, and the general habit of the patient, is the only remedy which can give a chance for life.

Besides bleeding in the beginning of this disease, the indications which he proposes are, to diminish the violence and duration of the cold fit; to evacuate and correct redundant and corrupted bile; to restrain excessive diarrhoea; and, lastly, in the
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Besides bleeding in the beginning of this disease, the indications which he proposes are, to diminish the violence and duration of the cold fit; to evacuate and correct redundant and corrupted bile; to restrain excessive diarrhoea; and, lastly, in the end

end of the disease, to oppose the tendency to putrefaction. For the first of these purposes he advises the plentiful use of warm mild diluents, and the application of bladders half full of warm water to the axillae and soles of the feet. Warm bathing, he observes, did not answer his expectation in promoting this intention of cure. He is inclined, however, to think favourably of it, and recommends it to farther trial, under proper regulations.

He advises, that the bile, when redundant, should be evacuated by gentle emetics and laxatives; and that, when corrupted, it should be corrected by acescent vegetable juices, and saline draughts. But the intestines, he observes, are often so extremely irritable, that these remedies prove much too stimulant and purgative, even when they are exhibited in small doses, and conjoined with vegetable mucilages.

To check immoderate diarrhoea, which the author thinks is seldom critical, although he allows that it often gives relief even in the beginning of the disease, he directs that recourse should be had to emollient glysters, gentle diaphoretics, or even to opiates and mild astringents, espe-

cially if the patient seems to sink under the discharge.

With a view of opposing the tendency to putrefaction, the great remedy to be depended upon is Peruvian bark. This, as the progress of the disease is so very rapid, must be had recourse to more early than in other fevers, and even before there be any distinct intermission. He closes this section with observing, that, notwithstanding the prejudices against blisters with lying-in-women, from the danger of their exciting strangury, yet that the great relief which they afford in other topical inflammations sufficiently justifies the practice of applying them, immediately after bleeding, in the puerperal fever. But supposing the objection to hold good, he is of opinion, that sinapisms, which are not liable to produce the same inconvenience, may be freely used. He allows, however, that he has not yet seen them sufficiently tried, to be able to recommend them from personal experience.

In the third section, the author treats of the prevention of the puerperal fever. As the most effectual means for this purpose he directs, 1st,
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Before delivery, the use of such medicines as tend to strengthen and invigorate the constitution, such as the Peruvian bark, chalybeate waters, and, in cases where the nervous system is very irritable, the prudent use of opium. 2dly, After delivery, the avoiding all occasional causes, such as violent emotions of the mind, imprudent exposure to cold, errors in diet, binding the body too tight, and, above all, the utmost attention to cleanliness and ventilation.

We are presented, in the fourth section, with a particular detail of fourteen cases of the puerperal fever which tend to illustrate the doctrine delivered in the former part of the work. In four of these cases, the author had an opportunity of examining the bodies after death; and in all of them the appearances of inflammation, supuration, or gangrene of the omentum, were very evident. The same appearances were sometimes seen on the surface of the intestines, which the author ascribes to the circumstance of continuity to the part primarily affected. The uterus was in general found properly contracted, and apparently in a sound state.

Having thus finished the account of the puerperal fever, the author proceeds, in the fifth section, to

to consider the nature, cause, and treatment of uterine haemorrhages. Floodings before delivery he ascribes to a partial separation of the placenta from the internal surface of the uterus; and, this, he tells us, may be occasioned by every cause encreasing the momentum of the circulation. Floodings after delivery he considers as depending on the imperfect contraction of the uterus, from a languor and want of tone in the system.

With regard to the treatment of these complaints, he inveighs against the vulgar practice of giving heating cordials, in order to revive the patient, as being highly pernicious and destructive. When the patient is so much exhausted by the discharge as to be in danger of sinking under it, if not properly supported, he recommends the use of those things which nourish without stimulating, such as animal broths and jellies. Bleeding also, he apprehends, has been too indiscriminately directed in flooding cases. This evacuation, he thinks, can seldom be proper, unless in the beginning of such floodings as happen before delivery, from plethora, inflammatory fever, external violence, or sudden emotions of the mind. He puts little dependence on styptic medicines as restraining uterine haemorrhages. He is
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inclined rather, with Hoffman, to believe that, by increasing the action of the vascular system on the contained fluids, they are more apt to augment than to diminish the discharge. Much more advantage may, in his opinion, be expected from such medicines as lessen the force of circulation and derive to the surface. Of this kind are antimonials exhibited in small nauseating doses, saline draughts with nitre, and the *sal sedativus Hombergeri*.

With regard to opiates; as the author imagines that their effects in accelerating the motion of the blood are much akin to those of volatile medicines and strong cordials, he in general condemns them as unsafe, and asserts that he has often seen internal haemorrhages increased by their exhibition. He dissuades us likewise against the use of ligatures, because, by retarding the circulation in the extreme arteries and veins; they must necessarily increase its momentum in the hypogastric and spermatic arteries, which supply the uterus; the consequence of which will be an aggravation of the evil.

The great remedy upon which Dr Leake relies, as being of all others the most effectual in flooding cases, is the application of cold. Heat, he observes,

observes, rarifies the blood and quickens the circulation ; while the effects of cold are diametrically opposite. Accordingly, the topical application of cold has been found to occasion an immediate stoppage of the menstrual flux, in opposition to the powerful efforts of nature. Upon these grounds the author founds his reasoning with regard to the propriety of having recourse to the application of cold for restraining uterine haemorrhages ; since it acts equally in condensing the fluids, as in constringing the solids, he thinks that the objection formerly made to the use of styptics, from their diminishing the capacity of the vessels, will not apply here : But, even if it should, he insists, that experience is so decisive in favour of this practice, as to outweigh all theoretical reasonings. In all cases of flooding, therefore, whether before or after delivery, he strenuously recommends the free admission of cold air ; the liberal use of cold drinks ; the repeated application of compresses, dipt in cold vinegar, to the region of the uterus ; and the immersion of the feet in cold water .

In cases of flooding before delivery, when all the methods hitherto mentioned have failed, and the patient appears to be sinking under the discharge,

discharge, the last remedy is to deliver her as soon as possible. And if, after delivery, the discharge continues profuse, and resists all other means, it may be necessary to throw up into the uterus styptic injections, as the aqua aluminosa Bateana, or a weak solution of colcothar vitrioli. In all flooding cases, the most perfect composure of mind is constantly to be enjoined.

The author concludes this treatise with some observations on convulsions, and the acute diseases which are most fatal to women during the state of pregnancy. He adopts the common division of convulsions into Idiopathic and Symptomatic; the first, when the sensorium commune is primarily affected; and the last, when it is so by the mediation only of the nerves, from a disease in some other part of the system, as the stomach or uterus. Another distinction, which he inculcates as being of the utmost importance in practice, is, that the convulsions of pregnant women are sometimes evidently connected with plethora, at other times with inanition. In the former of these cases, which he looks upon as by much the least formidable, a cure is to be attempted by early and copious bleeding; by diluents; by saline nitrous draughts; and by a very spare light diet.

In the latter, all evacuations are contra-indicated, and the cure entirely turns upon supporting the vis vitae. For this purpose, he recommends nourishing fluids given frequently in small quantities; broth clysters; and a decoction of bark with warm nervous cordials and opiates. When the circulation is very languid, he advises that blisters and sinapisms should be used; and that the extremities should be rubbed with hot flannels, or immersed in warm water.

The author next enumerates various remote causes of convulsions, to which, as they furnish indications of cure, he calls the attention of the practitioner. Thus, when the disease is suddenly produced by terror, bleeding, opiates, and the warm bath are indicated. When it proceeds from errors in diet, emetics and laxatives are required, and, after their operation, an opiate. When it depends on a suppression of urine, the bladder must be emptied by the catheter, or recourse must be had to warm bathing, emulsions, and anodyne clysters. When it follows from repelled cutaneous eruptions, the warm bath and gentle diaphoretics are requisite. When it arises from worms, anthelmintics must be employed; with this view, Plenck's mercurial solution may, he tells us, be used with perfect safety.

The author observes, that, for the removal of convulsions with pregnant women, it may sometimes be necessary to have recourse to speedy delivery. This, however, is a practice, which, he apprehends, has often been recurred to with too much precipitation; and in cases too, where it must not only prove ineffectual, but even highly dangerous. To women who have been subject to convulsions during pregnancy, he recommends the use of bleeding, opiates, and other suitable remedies, some time before the approach of labour. To these observations, are annexed seven cases of convulsions, occurring in pregnant women; in six of which, they were successfully treated by the methods here proposed.

This treatise is concluded with some remarks on pleurisy, dysentery, and small-pox. As these diseases have been very fully treated of by other writers, and, as the circumstance of pregnancy does not materially influence the practice, they are here considered in a cursory manner: And the observations, although accurate and judicious, contain nothing peculiarly interesting to such as are already acquainted with the received notions concerning the diseases in question.

II.

Dn. D. Petri Jonae Bergii *Methodus cremorem Tartari solubilem reddendi. Vid. Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum*, tom. quart. 4to, Norimbergae.

THE author sets out with observing, that, although we separate from the cream of tartar, the earth which seems capable of hindering its solution; yet it shews but a small degree of solubility. For the purpose of dissolving it in water, twelve times its weight is necessary, even when the menstruum is warm; and twenty times its weight, if the menstruum be cold. The importance of obtaining, with facility, in a state of solution, a medicine so valuable, led him to attempt some experiments on this subject.

After trying several substances, he found nothing so effectual, in rendering cream of tartar readily soluble, as the addition of borax. And this, he observes, had before been suggested by

the experiments of Lewis and Mayer. He cautions us, however, against the addition of such a quantity of borax, as will entirely saturate the acid of the cream of tartar. Because, in that case, there will be produced a sel seignette, a substance very different from soluble cream of tartar. His process for obtaining a soluble cream of tartar is as follows. To four parts of cream of tartar, he adds one of borax. This is dissolved in a sufficient quantity of water, and then strained off. The residuum, which, when the mass subjected to solution is fifteen ounces, will, in general, amount to one ounce, is thrown away. The pure solution, by evaporation, yields a white salt of an acid taste, and extremely soluble, which is to be preserved for use.

The author informs us, that he has used this soluble cream of tartar with great success in all kinds of fevers, when refrigerants were indicated. When, however, it is intended to operate as a laxative, a greater quantity is necessary than of common cream of tartar. But as it can easily be exhibited in a fluid form, and in a small quantity of menstruum, this occasions no inconvenience to the patient.

III.

Dn. D. Christiani Rudolphi Hannes *Observatio de diris Convulsionibus, Balneo frigido sanatis. Vid. Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum, tom. quart. 4to, Norimbergae.*

THE case with which we are here presented, is that of a girl, about sixteen years of age. She had formerly enjoyed good health, but, upon a sudden fright, she was seized with faintings and convulsions, which were relieved by bleeding and other remedies. The year following, however, they returned with greater violence than before. She had then recourse to pills composed of *assa foetida*, and other gums; to frictions with nerve ointments; and to powders composed of flowers of sulphur, sweet mercury, and camphor. While she used these remedies, her convulsions ceased, and an itchy eruption broke out over all her body. This complaint was removed by the medicines usually employed in such cases; but, when it disappeared, her menses became irregular

lar in point of time, and in smaller quantity than usual, with the appearance of fluor albus.

The year after her convulsions returned a third time with greater violence than ever. She then exhibited a most dreadful spectacle. Sometimes all the flexor muscles were contracted and her limbs drawn together; sometimes the extensors; and she lay in a convex form, supported by her head and feet; sometimes she was quite stiff. Besides these, they appeared also in other forms affecting different muscles.

The cold bath was then proposed, and it was advised, that she should be put into it, when there was any remission of her paroxysms. If after the bathing there was time, she was ordered to be diligently rubbed and swathed with bandages. A decoction of bark and rue was also prescribed for her; and once or twice a-day, a dose of opium with spirit of hartshorn. These medicines were continued for some time, without producing any relief. At length, however, there occurred some changes, which gave room to hope, that, in this way, a recovery might be obtained. Her fluor albus first ceased, then the menses returned to their proper periods, and in usual quantity; the convulsions recurred only in a slighter degree, and at longer in-

intervals, till at length they entirely ceased. It may be a question whether this cure was to be ascribed to the cold bath or not, as other remedies were employed at the same time, and as she had formerly recovered without its being used. The author, however, thinks, there is little doubt that, in this case, it was of itself effectual, as in the following spring she was attacked with the same disease, and cured by the bath alone,

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Dn. D. Joannis Caspari de Rueff, *de Hydropis Pectoris certa vel incerta Diagnosi. Vid. Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum*, tom. quart. 4to, Norimbergae.

IN this differtation, the author sets out with mentioning the difficulty of distinguishing hydrothorax, and the importance of doing so. Baglivi had pointed out a sudden waking from sleep, with signs of suffocation, as the pathognomonic symptom of this disease. He observes, that although this symptom be often decisive, yet that sometimes it is very fallacious, occurring where no water could be found in the thorax after death. On this subject, therefore, he adopts the conclusions of De Haen, who had formerly alleged that, if this nocturnal orthopnoea be sometimes wanting in the most violent hydrothorax; if at other times it appear only a few days before death; and if, when present, it is found in the advanced state only of the disease, at a time when

when all remedies would be ineffectual, it cannot be considered as a pathognomonic sign.

The author, in support of this opinion, adduces two cases. The first is that of a man who complained of a dry cough, straitness in his breast, and a great difficulty of breathing, with oedematous swellings in his feet, scanty urine, a nocturnal febrile paroxysm, and the pathognomonic symptom in question. All these complaints were soon removed by the use of squill medicines; but a short time after, when he seemed to be in perfect health, he died suddenly in the night from suffocation. Upon dissection, three pounds of limpid serum were found in the thorax, which sufficiently proved the uncertainty of the diagnostic. Besides this, in both ventricles of the heart, there was a polypus about seven inches in length, to which the author ascribes the immediate cause of his death.

The second case here related is that of a man who, about sixty years of age, was affected at night with such a degree of dyspnoea, that he could seldom lie in bed. His left arm and hand were also much swelled, and very torpid; which is considered by both Hoffman and Baglivi as a sign of latent hydrothorax. But, notwithstanding

ing this, by proper remedies, he was soon relieved, and lived till he was eighty years of age. He then died without any symptom of hydrothorax.

From all this the author concludes, that hydrothorax can rarely be known while it admits of a cure; that, when it is known, it can only be cured by paracentesis; and that, while the nature of the disease is doubtful, we should persist in the use of the remedies adapted to humid asthma, by the effects of which we may determine whether the disease we dread be present or not.

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Triga Observationum Sarco-hydroceles raræ magnitudinis Historias exhibentium, subjuncta simul Disquisitione Causarum, cur Sarco-Hydrocele in Teste sinistro frequentius quam dextro occurrat; a Georgio Balthasar Stolle, M. D. Vid. Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum, tom. quart. 4to, Norimbergæ.

THE author introduces this dissertation with three cases of sarcocele. The first is the case of a hypochondriac man who had been subject to hæmorrhoids. On being exposed to cold, he was attacked with febrile complaints; and the next day the hæmorrhoids appeared. But, from a violent fit of anger, the discharge by the hæmorrhoids was soon stopt; upon which a semitertian fever supervened, attended with great anxiety, loss of appetite, and colick pains. These last sometimes left the bowels, and attacked the left testicle, which, as well as the spermatic cord, became swelled. The fever was soon cured; but a considerable swelling still remained on the testicle; and the colick pains returned from
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the slightest cause. At this time he got some remedies from a quack, who took it to be a venereal complaint. But the swelling increased to a very great degree, still attended with the colick and stomach-complaints. Besides, such a considerable inflation of the belly came on as to endanger its bursting. This inflation of his belly, borborygmi, and other complaints, were much encreased by his taking food. When he took none, faintings were the consequence. After this, his scrotum became oedematous, and there was a considerable swelling reaching from the left hypochondrium to the right ileum. A hectic fever supervened, and, at last, apoplexy put an end to his misery. Upon dissection, the right testicle was found a little larger than usual; the left was of a monstrous size, and as hard as a stone. It was unequally swelled, and in the lower part there was a quantity of a serous fluid contained in a cyst. In the abdomen, there was a considerable quantity of ichorous matter; but the swelling which appeared externally seemed to have proceeded from a steatomatous mesentery, which was near an inch in thickness. The spermatic vessels were about four times the usual size, and the spermatic cord was much swelled. The left kidney

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was diminished, and the left emulgent collapsed; the right kidney, and its vessels, were larger than ordinary. The spleen, liver, and pancreas, were affected with scirrhi.

The second case gives an account of another sarcocele of the left testicle, which, when cut out, independent of the water that was contained between the tunica vaginalis and albuginea, weighed two pounds. Its appearance and consistence were like that of the former one; its colour of a pale yellow. This patient died of a hectic fever, in consequence of a diseased spleen.

In the third case there was no dissection. Hectic symptoms, with pains of the bowels, had come on after a quartan fever badly cured. These pains soon affected the testicle, which swelled to the size of a man's fist. The liver was also scirrhus, and increased to such a size, that it could be felt in the left hypochondrium. A phrenitis supervening soon killed the unhappy patient.

After narrating these cases, the author next proceeds to offer some observations concerning them. He is of opinion, that the semitertian, in the first case, proceeded from an inflammation of the mesentery, this viscus being usually reckoned

koned the seat of that disease. He mentions two examples of steatomatous mesenteries, which he observed in the hospital of Strasburg; the first of which weighed seventeen pounds, the second twenty four pounds. He contends, that these tumours proceed from inflammations of the mesentery.

The author then proceeds to consider, whether scrotocele happen oftener in the left than in the right testicle. Van Swieten, Hildanus, Haller, and others, do not offer any thing that will determine this question. Some thinking the left most subject to it, some the right, while others are of opinion that they may be indifferently affected. But the author concludes, from several observations of his own, supported by the authorities of Pfeffinger and Friedius, that diseases of all kinds from internal causes most commonly attack the left ovaria of women, and the left testicles of men. As a foundation for determining the reason of this fact, he thinks it necessary to examine, more accurately than he had before done, the nature of this disease.

He pronounces it to be a scirrhus, arising from a serous inflammation, according to the idea of Boerhaave. This may arise from diseases of different

ferent kinds affecting the feveral viscera, which, occasioning a stagnation of blood in them, will produce a determination to other parts; as follows not only from the laws of hydraulics, but from observations in diseases, and from experiments made on living animals. In confirmation of the last, the author cites an experiment of Brunn, who found that a dog, whose pancreas he extirpated, was seized first with an encreased flow of saliva, afterwards with vomiting, and then with a high degree of lasciviousness. He remarks also, that Morgagni, Bonetus, Heister, Malpighi, and Boerhaave, had observed nearly the same appearances upon the extirpation of the spleen. This, he thinks, can only be accounted for from a determination of fluids to the testicle; and when it is greater than sufficient for the purpose, stagnation must ensue. To such stagnation, he imagines that the testicles, from their situation, from the distensible nature of their arteries, and from the want of valves in their veins, will be particularly liable. And as the fluids here stagnating are of the ferous kind, he adds, that the inflammation must also be such. From the same cause continuing to act, the distension will be much encreased; and as all stagnating fluids change their nature, and degenerate

rate into a hard mass; from reabsorption, a scirrhous of the testicle will be formed.

After thus stating his own opinion concerning the nature of this disease, the author next goes on to take notice of the sentiments of others. Some have imagined the sarcocoele to be a fleshy mass, which they have explained from a luxuriant growth; or from a destruction of those membranes which Barbette has supposed to stop the mouths of nourishing vessels, lest they should convey too much nourishment. In refutation of these opinions, he observes, that the first never takes place, unless in cases of wounds; and that the last is merely hypothetical.

The author next attempts some account of the hydrocele. This, he thinks, happens from an obstruction of the extremities of the spermatic arteries, which, according to his former principles, must encrease the flow into the neighbouring vessels, occasioning the transfusion of a greater quantity of fluid, than the absorbents, compressed by the obstructed veins, are able to take up. Hence he thinks it is evident why the hydrocele is so common an attendant of the sarcocoele.

Having thus established the nature of these two diseases, he next proceeds to inquire into the reason

son why they affect the left testicle rather than the right. This, he thinks, he will be able to solve, provided he can shew a cause for a greater determination to the left testicle, and for stagnation there. On considering the rise and progress of both spermatic arteries, he finds, that the left rises nearer the testicle than the right, and that the left spermatic vein, instead of pouring its contents into the vena cava, rises up so as to pour them into the renal vein; by which it is evident, that its course must be much longer than that of the right spermatic vein. This being the case, it is evident, from the laws of hydraulics, that stagnation is most likely to happen on the left side; and that the tendency to it will be encreased by the left vein not accompanying the artery so closely as to have the progress of the blood assisted by its pulsations. It is also evident from the laws of motion, that any body is more apt to be retarded in proportion to the angle which it makes; and, therefore, the blood in the left spermatic vein will move more slowly than in the right, since it enters at right angles into the left renal vein, which also enters at right angles into the vena cava. Besides this, the left spermatic vein carries a greater quantity of blood than the right, receiving

branches from parts of the mesentery, mesocolon, and peritoneum which are nearest it. And, lastly, the left emulgent vein, before emptying itself into the vena cava, passes through an angle formed by the aorta and the superior mesenteric artery; so that, at every dilatation of these arteries, the vein will be compressed.

From a review of all these circumstances, the author thinks it apparent, that the left testicle is more subject to stagnation, and therefore inflammation, than the right; and consequently must be more liable to sarcocoele from internal causes. He concludes with observing, that, after what has been said concerning the nature of this disease, the principles upon which it may be cured, when taken in the beginning, are sufficiently manifest.

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Therapia Scabiei epidemicae per Diuresin nova, secura, secundum naturae mechanismum exacte accommodata, et per ipsam experientiam confirmata, a Christiano Ludovico Friderico Linckio, M. D. Vid. Nova Acta Physico-medica Academiae Caesareae Naturae Curiosorum, tom. quart. 4to, Norimbergae.

IN this dissertation, we are presented with an account of an epidemic itch, which resisted the influence of sulphur, mercury, and the other means of cure commonly employed. When repelled, it produced asthma, vertigo, fever, and, in children, convulsions. But it was successfully removed by the employment of diuretics.

The author, previous to his treating of this epidemic, offers some observations on the itch in general. This he defines to be a pustular or vesicular efflorescence, generally without fever, appearing, in the beginning, with an itchy heat between or round the fingers. He divides the disease into kindly and malignant, moist and dry, chronic and

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periodic,

periodic, superficial and deep, simple and complicated, epidemic and climateric, venereal and wormy. In proof of this last species, which has not been mentioned by other writers, he mentions an obstinate case of itch, which was cured in eight days after the evacuation of an incredible number of lumbrici from the use of jalap. The proximate cause of the itch, he supposes to be a viscid, sharp, ferous humour collected in the membrana adiposa, and reaching to the cuticle.

After these observations on the itch in general, he comes to treat of the epidemic before mentioned, and sets out with recounting the remote causes peculiar to it. One of these, he imagines to have been the excessive coldness of the weather, and the frequent changes in it which the common people, from their poverty, were not able to guard against. Another cause he assigns, was the food and drink which the common people were obliged to employ. In consequence of some rainy seasons, their sole nourishment was damaged corn; and, as the vines were destroyed from the same cause, their drink consisted entirely of fruits mixed with water, or more commonly of water alone. Besides these, he supposes, that several other causes might operate, which were in common

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to this epidemic with the ordinary itch, such as putrid foods of all kinds, sedentary life, previous diseases, and contagion. He seems to be doubtful whether animalcules occasion the pustules in the itch, or only seek a proper nidus there. With regard to the prognosis, he is of opinion, that the disease, if not repelled, is not dangerous; that, if joined with catarrh, it is not so safe as when without it; and that a person, who, having once recovered, suffers a relapse, is in more danger than others.

The author next proceeds to the method of cure, and first mentions the remedies which were commonly employed by the vulgar. These were external applications of sulphur, lead, turpentine, arsenic, mercury, human and animal urine, chalybeate waters, lime-water, and drastic purgatives. Such applications, he observes, were often attended with the worst effects. He next describes his own method of curing it by means of diuretics. He does not take the merit of this invention to himself, but acknowledges that he derived it from a dissertation written by Mauchartus, intitled *Therapia purpuræ receptiori tutior solidiorque*. He prefers diuretics to sudorifics, because, from the extreme vessels on the surface being ob-

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structed,

fructed, he imagines that, propelling the blood there, would rather increase the disease. The diuretic which our author employed, he terms the *liquor nitri fixi*. This he found to answer the purpose better than any other. This liquor, he tell us, is the solution of an alkaline sulphureous salt, obtained by deflagrating nitre with powdered charcoal. When rightly prepared, it is of a yellowish colour, and of a strong alkaline taste. It is not, he observes, a pure alkaline, but contains a portion of sulphur, formed by the nitrous acid joining the phlogiston of the coals. The existence of sulphur in this liquor is proved by its colour, and by the inflammable precipitate obtained by the addition of an acid. He advises that the nitre used for this preparation should be free from all mixture of sea-salt, and that the charcoal should be of beech or beet-wood, as containing the largest proportion of phlogiston. The method of preparing the liquor here recommended, is described in the dispensatory of Wurtemberg. After cleansing the primae viae, the author administered this medicine, and, with it, either some mucilaginous decoction, or plentiful dilution with common water. The consequence of this was the excretion of very foetid urine, with a
copious

copious sediment. When the acrimony of the urine was so great, as to cause pains in the urethra, pills of soap and lintseed were given. The accidental occurrence of other diseases, the author treated in the common method. But, when those symptoms occurred, which have already been mentioned as following a retrocession of this eruption, he gave camphor in large doses, mixed with absorbents, by which the eruption, he tells us, was restored; and, afterwards, it was cured by the solution of the nitrum fixum. With regard to diet, he did not allow his patients meats salted or difficult of digestion; and he forbade the use of fermented or spirituous liquors. The only external application he used was, water with soap, or almond powder, to clean the skin. But, when malignant ulcers occurred, they were treated in the common manner.

VII.

Essays Medical and Experimental, on the following Subjects. 1. *On the Columbo Root.* 2. *On the Orchis Root.* 3. *On the Waters of Buxton and Matlock in Derbyshire.* 4. *On the medicinal Uses of fixed Air.* 5. *On the antiseptic and sweetening Powers, and on the Varieties of fixed Air.* 6. *On the noxious Vapours of Charcoal.* 7. *On the Atrabilis.* 8. *On Sea-Salt.* 9. *On Coffee.* To which are added, *Select Histories of Diseases, with Remarks; and Proposals for establishing more accurate and comprehensive Bills of Mortality.* By Thomas Percival, M. D. F. R. S. & S. A. 8vo, London.

THE different articles of which Dr Percival here treats, are considered in the same order in which they are arranged in the title-page. He tells us, on the authority of Dr Hope, who derived this information from Captain Rainey, that the Columbo root grew originally on the continent of Asia, and was from thence transplanted to Columbo, a town in Ceylon, which now gives name to it, and supplies all India with it.

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The Columbo root is brought to this country in circular pieces, from half an inch to three inches in diameter, and from a quarter of an inch to two inches in length. Its sensible qualities are, an aromatic smell, and a disagreeably bitter, and slightly pungent taste. With regard to its medical properties, the author informs us, that Mr Johnson, a surgeon of eminence, used it with great success in the cure of cholera morbus in the East Indies. Without using any means to cleanse the stomach or bowels, he found that it soon stopt the vomiting; and that the purging and remaining complaints quickly yielded to the farther use of it. The dose he gave was from half a dram to two drams of the powder, every three or four hours. Dr Percival informs us, that he has frequently observed salutary effects from its use in diarrhoea and dysentery; and has more than once experienced its efficacy in the vomitings which attend the bilious cholic. He farther informs us, that, in bilious fevers, fifteen or twenty grains, with an equal or double quantity of vitriolated tartar, given every five or six hours, produced very beneficial effects. By the advice of our author, Dr Haygarth of Chester tried it in an epidemic fever, of the bilious kind, and

and found, that, after the primæ viæ were unloaded, it was a most useful remedy in allaying the nausea and reachings to which patients were liable, and likewise in preventing relapses.

Besides these diseases, the author recommends Columbo root in the severe vomitings and diarrhoea of children during dentition; in a languid state of the stomach, attended with want of appetite, indigestion, and flatulence; in habitual vomitings, proceeding from weakness or irritability of the stomach; and in the nausea and vomiting occasioned by pregnancy. To illustrate these general observations, five cases are subjoined, after which, he proceeds to relate some experiments which he made with Columbo root. In these, his views seem principally to have been, to discover the most proper form of exhibiting this medicine, and to determine its power as an antiseptic.

Upon infusing Columbo root in rectified spirit of wine, in French brandy, Madeira wine, white wine, distilled water, white wine vinegar, and hard spring-water, he found that the tincture obtained by rectified spirit of wine, was considerably stronger than any of the rest; that the degree of impregnation obtained from the different menstrua, was in the
order

order in which they are enumerated; that the infusion of Columbo root is more perishable than that of other bitters; and, that the addition of orange-peel renders this infusion less ungrateful to the stomach.

In the third experiment, Dr Percival describes a process for making an extract of Columbo root, which he frequently used, and found of equal, if not superior efficacy to the powder itself.

With regard to the antiseptic power of Columbo root, it was found that beef kept longer sweet in an infusion of Peruvian bark, than in that of Columbo root. But that the infusion of bark, added to putrid ox gall, instantly produced a coagulation, and considerably increased its foetor; whereas, the infusion of Columbo root united with it, and corrected its offensive smell. This, Dr Percival imagines, serves to explain its action in cholera morbus, and renders it probable that it would prove very salutary in the yellow fever of the West Indies.

From adding an infusion of Columbo root to the alimentary mixture, the author finds that it moderates the process of digestion without suspending it; and that it both prevents acidities, and neutralizes them after they are formed.

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The last experiment here related, was made with a view of ascertaining the action of Columbo root on the heart and arteries. Upon finding that a scruple had no effect upon his pulse, the author took half a dram of it. His pulse then beat eighty strokes in a minute; but, in ten minutes after taking the powder, it became fuller and slower by three strokes. From this, he concludes, that the Columbo root does not belong to the class of heating bitters; and that it may be used with advantage in phthisis pulmonalis, and hectic cases, to correct acrimony, and strengthen the organs of digestion,

The author next treats of the preparation, culture, and use of the orchis root. From this root, which grows well in a dry and not very fertile soil, is prepared salep, which forms a considerable part of the diet of the inhabitants of Turkey, Persia, and Syria. The method of preparing the salep is as follows: The new root is to be washed in water, and the fine brown skin which covers it, is to be separated by means of a small brush, or by dipping the root in warm water, and rubbing it with a coarse linen-cloth. The roots thus cleaned, are to be spread on a tin plate, and placed in an oven, heated to the usual degree, where they

they are to remain six or ten minutes. In this time they will have lost their milky whiteness, and acquired a transparency like horn, without any diminution of bulk. Being arrived at this state, they are to be removed in order to dry and harden in the air, which will require several days to effect; or they may be dried in a few hours, by using a very gentle heat.

Salep, thus prepared, contains a great quantity of vegetable aliment; as a wholesome nourishment, it is much superior to rice; and has the singular property of concealing the taste of salt-water. Hence, to prevent the dreadful calamity of famine at sea, it has been proposed that the powder of it should constitute part of the provisions of every ship's company. With regard to its medical properties, the author observes, that its restorative, mucilaginous, and demulcent qualities, render it of considerable use in various diseases, when employed as aliment; particularly, in sea scurvy, diarrhoea, dysentery, symptomatic fever arising from the absorption of pus, and the stone or gravel. From these considerations, Dr Percival recommends the culture of the orchis root as an object of considerable importance to the public, and highly meriting the attention of the rational farmer.

The

The author next presents us with some experiments and observations on the waters of Buxton and Matlock in Derbyshire. The water of St Ann's well at Buxton, is found to contain calcareous earth, fossil alkali, and sea-salt, but in very small proportion. The temperature of the bath is about 82 degrees of Fahrenheit's thermometer; and that of St Ann's well, which is a smaller body of water, is somewhat less. The water itself is transparent, sparkling, and highly grateful to the stomach. The experiments our author made with it were with a view of determining its effect upon the pulse. These experiments having evinced the heating qualities of Buxton water, Dr Percival suggests several precautions to be observed on the use of it. He advises that small quantities only should be drunk at a time; that the belly should be kept open during its use; and that, in beginning a course of this water, it should be allowed to remain some seconds in the glass before it be swallowed, that some part of the mineral spirit with which it abounds may be dissipated. As the Honourable Mr Cavendish had discovered that iron may be suspended in water by means of fixed air, it appeared probable to our author, that a chalybeate impregnation might,

might, with facility, be communicated to the Buxton water. This he found confirmed by experiment; and he imagines that this artificial water, from its agreeable warmth, volatility, levity, and gratefulness to the palate, will, in many cases, be preferable to natural chalybeate springs.

Matlock water, the author observes, is grateful to the palate and of an agreeable warmth; but it shews no marks of any mineral spirit. From the experiments here narrated, it appears to be slightly impregnated with selenites or other earthy salts. But it does not seem to contain iron, which it has generally been supposed to do. It appears to have little effect upon the pulse. In its chemical and medicinal qualities, it greatly resembles Bristol water; but Dr Percival thinks, that it claims a preference to this last in hectic cases, and other disorders where the circulation is rapid and irregular, as it is less disposed to quicken the pulse, and may, therefore, be taken in larger quantities.

We are next presented with some observations on the medicinal uses of fixed air. Having found that fixed air may be inspired with impunity, Dr Percival has exhibited it as an antiseptic, in more than thirty cases of phthisis pulmonalis. In several

ral of these cases, the hectic fever was abated ; the matter expectorated became less offensive ; and in one which was treated by Dr Withering at Stafford, a perfect cure was performed. The author has likewise found fixed air to be of service, when applied to foul ulcers and cancers, although, in the last, there be but little prospect of a complete cure. He has also found it of great use in the ulcerous sore throat.

In malignant fevers, the author proposes that wines abounding with fixed air, or artificially impregnated with it, should be administered, to check the septic ferment and sweeten the putrid colluvies of the *primae viae*. In putrid diarrhoea and in dysentery, he farther advises the injection of fixed air into the intestines. He proposes, that, in place of simple water, as directed by Dr Priestly, an infusion of malt should be impregnated with fixed air, and is of opinion, that such a medicinal drink might be prescribed with great advantage in scrophulous complaints, and in those disorders in which general acrimony prevails. A remedy capable of being applied to so many important purposes in medicine certainly well deserves the attention of physicians.

The

The author next treats of the antiseptic and sweetening powers of fixed air, and of its varieties. He is of opinion, with Dr M'Bride, that fixed air has the power of both retarding and correcting putrefaction. The first of these effects, he imagines, may be ascribed to its preventing the farther escape of fixed air from the septic body; and the last, to its abstracting from it and holding suspended the putrid particles which it emits. With regard to the varieties of fixed air, from our authors experiments, it appears, that the fixed air generated by putrefaction possesses properties different from that generated by the breath of animals, and that the fixed air of metals is of a kind different from that which is contained in alkalis and calcareous earth.

We are next presented with some observations on the noxious vapours of charcoal, communicated to the author by Dr Dobson of Liverpool. The baneful influence of the vapours arising from burning charcoal has already been authenticated by many cases, and has in general been ascribed to suffocation. But, from a case here related, as well as from several other histories and observations referred to, it is alledged, that

these noxious vapours exert their effects on the brain and nerves. For the recovery of those who have been exposed to such vapours, it is proposed, that they be carried into the open air, and that the air be fanned backwards and forwards to assist its action; that the face, mouth, and nostrils, be repeatedly washed with cold water; and that, as soon as practicable, the patient be got to drink some cold water. Besides this, breathing into the mouth of the patient, frictions, cupping, bleeding, and blistering, are likewise indicated. Dr Percival next subjoins some observations on the atrabilis. He is of opinion, that it is no other than bile become acrid by stagnation in the vesica fellea, and rendered viscid by the absorption of its fluid parts.

From the experiments of Sir John Pringle, it was concluded, that sea salt, applied in a small quantity, quickens putrefaction. But, from the experiments of Dr Percival, it appears, that this quality is to be ascribed to the impurity of the salt; and that, even when salt has this effect, it prevents the progress of putrefaction beyond a certain degree.

The author next subjoins some experiments on coffee. From these experiments it appears that it is slightly astringent; that it moderates
alimentary

alimentary fermentation; and that it is powerfully sedative. Its action on the nervous system he supposes to depend on the oil it contains, which receives a slight empyreumatic flavour by the process of roasting.

To these experimental essays are annexed select histories of diseases, of which the following are the principal: 1. A case of difficult deglutition cured chiefly by the use of mercury. 2. Three cases of dropsy, the first of which was removed by spontaneous vomiting; the second terminated fatally, and, upon dissection, the right ovarium was found very much enlarged and scirrhous; the third likewise ended in death, from a violent orthopnoea, which the author imagines proceeded from anasarca of the cellular membrane of the lungs. 3. A case of palsy arising from the effluvia of lead, in which electricity was successfully employed. 4. Two cases of colic cured by the use of alum. This remedy is given from ten to twenty grains, mixed with an equal proportion of sugar, gum arabic, or sperma ceti. The author informs us, that, in about fifteen cases, he has employed it with such success as induces him to propose it to the trial of other physicians. 5. Four cases of different diseases,

in which the warm bath was successfully employed. 6. Some miscellaneous cases and observations, in which, among other things, we have some account of the Ajava seed, celebrated in East Indies for the cure of colic; and of the remedy proposed by Mr White of York as a solvent of biliary calculi, which appears to be alcohol saturated with *oleum terbinthinae aethereum*.

This valuable treatise is concluded with a proposal for establishing more accurate bills of mortality. On this subject, he proposes, 1. That a table of christenings, marriages, and burials be kept in every place of religious worship, to be formed into one general bill, and published quarterly or annually. 2. That the table of christenings specify the males and females who are baptized, and the table of deaths express the males, who die under the several denominations of children, batchelors, married men, and widowers; and the females who die under the corresponding denominations of children, maidens, married women, and widows. 3. That the ages under five be specified by single years, and afterwards by periods of five or ten years. 4. That the bills of mortality express particularly the number dying of each disease, in the several divisions of life, and different seasons of the year.

year. For this purpose, he proposes that two tables should be kept, the one of deaths, the other of diseases. The scheme might certainly be carried into execution, with no great degree of trouble; and, if conducted with accuracy, would unquestionably afford the most important instructions to the philosopher as well as the physician.

VIII.

Experiments and Observations on the following Subjects. 1st, On the Preparation, Calcination, and medicinal Uses of Magnesia Alba. 2. On the solvent Qualities of calcined Magnesia. 3. On the Variety in the solvent Powers of Quick-lime, when used in different Quantities. 4. On various Absorbents, as promoting or retarding Putrefaction. 5. On the comparative antiseptic Powers of Vegetable Infusions prepared with Lime, &c. 6. On the sweetening Properties of fixed Air; by Thomas Henry Apothecary. 8vo, London.

IN the first chapter of this treatise, the author sets out with giving us an account of an improved method for preparing

magnesia alba, which he was induced to publish, from observing that the magnesia generally to be found in the shops, is either extremely coarse, or, which is still worse, often sophisticated with calcareous substances, differing greatly from true magnesia.

Magnesia was originally prepared from a liquor called the mother of nitre. Hoffman prepared it from the bittern remaining after the crystallization of sea salt. And Dr Black employed the factitious Epsom salt for the same purpose. The author of the treatise now before us, directs that it should be prepared in the following manner,

Dissolve, says he, any quantity of sal catharticus amarus, commonly called Epsom salt, in its own weight of water, filter the liquor, and add to it, by degrees, a filtrated solution of pearl ashes in an equal quantity of water, stirring them gently, until the mixed liquors have acquired the appearance of a complete coagulum, then cease adding any more of the alkaline lixivium; and having diluted the precipitate, and mixed it intimately with a small quantity of hot water, immediately throw the mixture into a large quantity of boiling water : Keep it boiling for a quarter of an hour, then

then take it out, and put it into glazed earthen vessels. As soon as the powder has subsided, and before the water be quite cold, pour it off, and add a fresh quantity of boiling water; repeat these ablutions with several parcels of hot water, till the liquor has entirely lost its saline taste. Then let it be so agitated as to suspend the finer parts of the powder; in which state, decant it into other vessels, and having separated the water from the magnesia, by inclination, put it on large chalk stones, till a considerable part of the humidity be absorbed. Then wrap it up in sheets of white paper, and dry it before the fire. Pour hot water on the remaining powder, stir it, decant it in its turbid state, and separate the magnesia from the water as before. By these means, adds he, the whole or most of it will be reduced to an equal degree of fineness.

In this process, the author advises, that particular attention should be paid to the purity of the water. He prefers rain water collected free from impurity, or clear river water. The drying, he tells us, should be performed with expedition; for which reason, the chalk-stones should be exposed to a moderate degree of heat. He concludes with directing, that the vessels should be carefully

covered, that no dust may enter, and that cleanliness should be particularly attended to through the whole process.

After this account of the process for making magnesia, Mr Henry next presents us with some miscellaneous observations. Magnesia, he observes, possesses a purgative power, which the calcareous earths entirely want. This he ascribes to its forming with all the acids a purging salt. But he farther alledges, that it is to be considered as an earth *sui generis*, and is even of itself in some degree purgative, independent of its junction with any acid. With regard to Dr Cadogan's process for making magnesia, he observes, that the proportion of *lixivium tartari* to the *sal catharticus amarus* is greatly insufficient to precipitate the magnesia, and that the preference which the Doctor gives to *sal tartari* over potashes, is not well founded, and proves only an unnecessary refinement.

Mr Dale Ingram had alledged, that pure magnesia could not be prepared from factitious Epsom salt, but was to be obtained only from Epsom waters. To this, Mr Henry replies, that magnesia earth is universally allowed to be the same, from whatever substance it be obtained, provided it be
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separated in a pure state; and that Mr Ingram's process, while it has no advantage, must be attended with great trouble and expence, as, in order to procure a single pound of magnesia, it will be necessary for him to evaporate above sixty gallons of water, to between five and six pints, before he begins the precipitation.

The author proceeds, in the third chapter, to enumerate the medical properties of magnesia. He sets out with mentioning its utility as an absorbent, in disorders of the stomach and bowels arising from acidity. It has been esteemed hurtful in bilious habits, where there is a disposition in the stomach contrary to acidity. Of this, however, our author is doubtful; and, where putrid bile is to be corrected, he thinks good purposes may be answered, by taking magnesia, with an acid in the state of effervescence, as the fixed air, thus extricated, will correct the putridity of the contents of the intestines, while they are, at the same time, evacuated downwards. Although he does not positively assert that it is useful in diseases of the skin, yet he is of opinion, that, in such cases, from entering the circulation in the form of a mild neutral salt, it may act as an excellent alterative, proving both diaphoretic and diuretic.

Having

Having given this detail of the medicinal properties of magnesia in its natural state, he next proceeds to treat of calcined magnesia. He agrees with Dr Black in thinking that the changes produced on magnesia by calcination arise from its being thus deprived of fixed air. When employed in this state for medical purposes, he tells us, that it produces none of those disagreeable effects in the stomach which arise from the extrication of the fixed air of uncalcined magnesia ; and that it proves nearly as operient as a double quantity of uncalcined magnesia. He is of opinion, that it may be useful in distensions of the bowels, arising from flatus ; that it may be successfully employed as a cathartic with patients labouring under the stone, who are using the lixivium saponaceum ; and that, joined with warm aromatics, it may be of service in correcting the great flatulency which so much afflicts people of a gouty disposition.

In the sixth chapter, the author considers the action of various absorbents as promoting or retarding putrefaction. We are here presented with eight experiments. From the first, it appears that magnesia, in common with other absorbents, proves considerably antiseptic to animal flesh. The second, on the contrary, shews, that calcined magnesia

nesia is possessed of strong antiseptic powers. But, in the third and fourth experiments, when magnesia was added to ox-gall, it retarded putrefaction very considerably, whether applied in a natural or a calcined state. And, from the fifth and sixth experiments, we farther learn, that magnesia has a power of sweetening ox-bile already putrid.

In the seventh experiment, the author compares the relative septic powers of different absorbents. Bile, mixed with crab's eyes, grew putrid in forty-eight hours; with chalk, in twelve hours; with magnesia, on the ninth day; with *pulvis e chelis cancrorum*, on the tenth; with *pulvis contrayervae compositus* it was preserved free from corruption for about three weeks; and, with calcined magnesia, no change was observed upon it for above the space of a month. By the last experiment, it was found, that chalk and magnesia, neutralized with distilled vinegar, preserved bile several days longer than a solution of the artificial Epsom salt. From these experiments, Mr Henry concludes, that all testaceous and absorbent medicines are by no means improper in fevers of a putrescent type; that, where bile is suspected to be the cause of any putrid disease, those antiseptics should be prescribed

bed which particularly impede its corruption; that, as calcined magnesia is a more powerful antiseptic than most other absorbents, it merits a preference to these; and that, where an acid cacochymy prevails, magnesia, or other absorbents, taken immediately before or after meal-time, may, by increasing the putrefactive fermentation of animal food, be of very good service.

The seventh chapter contains some experiments for ascertaining the solvent powers of calcined magnesia. Dr M'Bride had found, that lime, triturated with resinous gums, promoted their solution in water; but, at the same time, that it communicated to them a highly disagreeable taste. From Mr Henry's experiments, it appears that magnesia, while it has an equal power in promoting solution, is not attended with this inconvenience. Thus, therefore, we have an easy and very elegant method of preparing aqueous tinctures from the gum-resins. These tinctures, however, he observes, are calculated only for extemporaneous prescription, as most of them deposite a sediment when they have been kept for a week or two.

In the eighth chapter, the author treats of the various solvent powers of quick-lime in different quanti-

quantities. As a menstruum, well calculated for dissolving vegetable astringents, seemed to be a desideratum in pharmacy, he resolved to try how far the solvent power of water could be increased by means of quick-lime. With a view of ascertaining this, a determined quantity of Aleppo galls, Oak-bark, Peruvian bark, Snake-root, Columbo root, Contrayerva root, Jalap, Ipecacuan, and Rhubarb, were each rubbed, for an equal length of time, with four ounces of rain-water; with two scruples of quick-lime, and the same quantity of rain-water as before; and with four ounces of lime-water.

From the result of these experiments, it appeared, that the addition of quick-lime triturated with the roots, impeded their solution in water. This the author ascribes to the lime being in greater quantity than the vegetable could saturate with fixed air, by which means, the water would become so impregnated with lime, as to be unfit to act upon the vegetable. But, it farther appeared, that lime-water extracted the soluble parts of many astringent vegetables, and especially their colouring principles, more powerfully than distilled water.

Mr Henry

Mr Henry next proceeds to examine the comparative antiseptic powers of the different infusions above mentioned. With this view, pieces of beef were put into them. From what appeared upon this trial, he concludes, that lime-water, when used in such a quantity, in extracting the virtues of vegetables, as not to be saturated with the fixed air it receives from them, strongly counteracts putrefaction, although it destroy the texture of animal bodies exposed to its action. But, when employed for the same purpose, in such a proportion as to be fully saturated with air, it increases the antiseptic power of the vegetable, and does not diminish cohesion in the fibres of animal bodies exposed to its action.

Mr Henry concludes this ingenious treatise with considering the sweetening properties of fixed air. The experiments of Dr M'Bride on this subject were rendered in some degree doubtful by those afterwards published by Dr Alexander. The experiments with which we are here presented were made with a view of determining this point. They are three in number; and the result of them shews, that fixed air powerfully corrects the foetor of putrid substances. By some it has been supposed, that this property

property of fixed air might depend on the acid it contained; but, from fix experiments which are here related, there seems to be no foundation for such a supposition. He concludes, therefore, that it must be ascribed to some other principle not yet ascertained.

IX.

Dell' azione del Cuore ne' Vasi sanguigni nuove osservazioni dell' Abate Spallanzani, Sacerdote della Congregazione della B. Vergine, e. S. Carlo di Modena. Professore di Filosofia nell' Università e Collegio de' Nobili, e Membro della Società Reale di Londra. 8vo, Modena.

ALTHOUGH we have not had an opportunity of examining this ingenious treatise itself, yet we flatter ourselves that the account here given of it, which is taken from the last volume of the Leipstick Commentaries, will not be unacceptable to most of our readers.

This work is written in the form of letters to Dr Haller, and contains observations concerning the motion of the blood, made upon a plan which he himself had before pointed out. It may, however, be observed, that the experiments of Haller were

were made principally upon frogs, and those of this author upon the water salamander. The treatise itself is divided into six chapters, which treat of the action of the heart upon the largest, the middle-sized, and the smallest arteries, upon the smallest, the middle-sized, and the largest veins.

Upon laying open the thorax, the motion of the heart can be distinctly seen through the pericardium, which is exceedingly thin. He observes, however, that the heart, while included in the pericardium, does not, in its diastole, raise itself so high as when that membrane is cut away. In the first case, it ascends in a curve line from the left towards the right side; but, in the last case, it ascends perpendicularly. After examining a hundred and fifty salamanders, he could never discover one in which the liquor pericardii was wanting. He observes, that the blood rushing into the auricle assumes a red colour than it had before, which he ascribes to its being accumulated in greater quantity. The blood in the aorta, he tells us, does not flow in a continued stream; and, after an animal had been long subjected to an experiment, he could discover moments at which this vessel was entirely empty.

In the middle-sized arterial vessels, if the animal be very lively, the motion is in a great measure uniform. But, upon the animals being debilitated, the blood moves slower in their diastole than in the systole. At length, in their diastole, the motion either ceases entirely or is retrograde. This flux and reflux, our author terms an oscillatory motion. This oscillation in the mesentery seems to begin at the same instant, both in the trunk and small branches. But, in the lungs, it seems to begin in the small arteries, and proceed gradually to the larger branches. No air, he tells us, can be discovered in the blood, unless when there is a rupture of vessels; and then it forms globules much larger than those of the blood.

The smallest or capillary arteries, every where observable in the body, are not all so narrow as to allow a passage only for one globule of blood. In these, the blood moves only a little slower than in the middle-sized arteries. But, upon the animals being long tormented, the oscillatory motion above described begins sooner in them, and the motion of the blood in them sooner ceases altogether. This author, as well as Dr Haller, discovered that the red globules, in vessels of every di-

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ameter, swim in another fluid, the particles of which are invifible.

Dr Haller was unable to difcover whether the red globules change their figure or not. Fontana, however, had obferved this in the pulmonary veffels of frogs. And our author confirms it from his obfervations on the veffels in the gills of the falamander. He obferved particularly, that, where thefe veffels formed an acute angle, the globules affumed a femilunar figure, and did not recover their former fhape till they had paffed the angle.

His next obfervations are upon the venous fyftem. Dr Haller had not been able to difcover the beginning of veins in the mefentery of a frog, nor could Spallanzani in that of a falamander. The fize of the fmalleft veins which he difcovered, was fuch, that a fingle globule could move in them without friction; but, at the fame time, it came fo near in contact with the fides of the veffel, that the fpace between them could not be meafured. From experiments, he found, that the fmalleft veins are fubject to the motion of the heart; and, while its vigour remained entire, he could difcover no difference between the celerity of the blood's motion in thefe and in the fmall arteries.

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But, upon the force of the heart being weakened, the celerity of the blood's motion began to languish in the small veins, before it did so in the small arteries. He found, that the motion of the blood in the trunks of veins was greater than in the branches, when many of these joined together. But this celerity was not equally encreased, when a small number of branches joined together. This difference of celerity, he observed to extend to the conjunction of even the smallest branches.

Dr Haller had observed, that, upon a small branch of a vein being inserted into a larger, the celerity of the blood's motion in the latter, was often so great as to impede the ingress of blood from the former. This the author found particularly confirmed in the instance of the small veins, which after creeping upon the aorta form themselves into a small trunk, and then land in the vena cava.

With regard to the middle-sized veins, the author observes, that he could discover no difference between the colour of the blood in these and in arteries of the same size. This he adduces as a farther confirmation that the change of colour in the blood depends entirely on the aggregation of the globules. In the mesentery he found the veins both more numerous and larger in di-

ameter than the arteries. But, if the animal was vigorous, the motion of the blood in both was equal, except that the impulse of the heart could not be distinguished in the veins. In the trunk of the pulmonary vein, however, he discovered an uncommon velocity, the motion of the blood here being about two-thirds quicker than in the other middle-sized veins. While the circulation continued vigorous, he could not discover whether the blood moved more quickly in the axis of the veins or at the sides. But, when the circulation became languid, the former of these evidently took place. By slightly wounding a vein, as well as an artery, globules of elastic air can, with facility, be introduced into the blood.

In the last chapter, the author treats of the largest-sized veins, that is, of the superior and inferior cava. The celerity of the blood in these he did not find to be greater than in the middle-sized veins. The blood in the superior cava had not an equable motion, but entered the heart in alternate waves; and the pulsation of either vena cava was found to be varied in proportion to its size. The author concludes this treatise with again illustrating, by new examples, the effect which the insertion of small veins into larger ones has upon the celerity of the blood.

IX. Me-

IX.

Memoire sur un Moyen de dissoudre la Réfine Caoutchouc, connue présentement sous le nom de Réfine élastique de Cayenne, et de la faire reparoitre avec toutes ses qualities. Par M. Macquer. Vid. Histoire de L'Academie Royale des Sciences, Année 1768. 4to, Paris.

THE properties of this resin, which is found in different parts of South America and Asia, render it one of the most singular productions of the vegetable kingdom. No substance is yet known which is at the same time so pliable and so elastic; and it is farther a matter of curiosity, as being capable of resisting the action of very powerful menstrua.

From the account of M. de la Condamine, we learn, that this substance ouzes out, under the form of a vegetable milk, from incisions made in a certain species of tree in the country in which it is found. This liquor gradually dries, and is formed into a substance of the appearance of leather, which is in a very high degree pliable and elastic;

while at the same time it possesses a considerable degree of solidity. On account of these properties, the Omaguas, a numerous nation on the banks of the river of the Amazons, employ this resin, while yet in a state of milk, for making different utensils, as goblets, bottles, and the like. As the same properties would render it of singular utility for many other purposes in arts, philosophers have long wished to discover some method of dissolving it in such a manner that it could assume different figures with equal ease, as when in its original state of milk. In the memoir now before us, we have an account of the manner in which this end may be effected.

The state of vegetable milk in which the Caoutchouc resin is found when it comes from the tree, led Mr Macquer to imagine, that it was composed of an oil and a watery matter. From its wanting aromatic flavour, from its little volatility, and from its being incapable of solution in spirit of wine, he concluded that the oil which entered its composition was not an essential, but a fatty one. Hence he thought it probable, that it passed from a fluid to a solid form, by the evaporation of the watery part; and that the oily solvents would reduce it to a soft state.

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The first trials he made for dissolving it were with lintseed oil, essence of turpentine, and several others. But all he could obtain by means of these menstrua, was a viscid substance incapable of being hardened, and totally void of elasticity. The rectified essential oil of turpentine was employed with seemingly greater success. To separate from this menstruum the caoutchouc which it had dissolved, Mr Macquer added spirit of wine to it. But the consequence was, that part only of the oil united with the spirit, the rest remained obstinately attached to the resin which it had dissolved, and thus prevented it from assuming a solid consistence.

The author next endeavoured to dissolve it by means of heat in Papin's digester. But neither water nor spirit of wine, although, in this way, capable of softening the hardest bones, could produce any other effect upon it, than to render it more firm than before. After this, he tried what effect the milky juice of other vegetables would have upon it. He used several kinds, particularly that of the fig. But, in this way, he could obtain no solution. From the great volatility of æther, he was next induced to try it as a menstruum; and for this purpose prepared some with great at-

tention. The caoutchouc cut into little bits, and put into a proper vessel, with as much of this æther as was sufficient to cover it, was perfectly dissolved without any other heat than that of the atmosphere. This solution was transparent and of an amber colour. It still preserved the smell of the æther, but mixed with the disagreeable odour of the caoutchouc, and it was a little less fluid than pure æther. Upon its being thrown into water, no milky liquor was produced, but there rose to the surface a solid membrane which possessed the great elasticity and other peculiar properties of the caoutchouc.

The Indian method of forming bottles, goblets, and other utensils of the caoutchouc, is by making moulds of clay, which they cover with thin layers of the caoutchouc, taking care never to lay on a fresh one till the former be dry. After it has acquired the proper thickness, by an instrument fitted for the purpose, they take out the clay.

The same process may be followed in forming vessels of the caoutchouc dissolved in æther. But, in forming small vessels, Mr Macquer did not employ moulds of clay, but of wax, which were easily removed by throwing the vessel, after it was finished, into boiling water.

X.

Dissertatio medica inauguralis, de Balneo; Auctore Bartholomæo Parr. 8vo, Edinburgi.

IN this dissertation on the warm bath, the author confines himself entirely to the effects of simple warm water. He divides his subjects into four parts. In the first, he treats of the effects of the warm bath; in the second, of its use in diseases; in the third, of its abuse; and, in the fourth, of its administration.

He observes, that the effects of the warm bath on the simple solids, and on the secretions, have been accurately detailed; but that the changes it induces on the pulse, and on the heat of the body, have either been entirely neglected or considered only, at least in as far as they have been the subject of experiment, in a slight and cursory manner. Hence, to ascertain these changes more exactly, he has made many experiments on different people, with the result of which we are here presented.

When the water in the bath raised Fahrenheit's
thermometer

thermometer to 96 degrees, he found that the heat of the body and the pulse were either not changed, or were so in a slight degree only. The superficial veins did not swell in the bath. But, after coming out of it, the urine was discharged in a larger quantity than usual, and the perspiration seemed to be increased.

With the water at 98 degrees, the heat of the body was not changed; the pulse was very little quickened; and, after an hour, returned to its natural state. The face was somewhat swelled and red, and was also a little moist; but there was no apparent sweat upon it. After coming out of the bath at this heat, the pulse seemed less frequent than natural, and a very copious perspiration ensued.

At a hundred degrees, in a man whose pulse was naturally sixty, after twenty-five minutes continuance in the bath, it was raised to seventy-two, and became fuller than natural. The heat of his body was increased two degrees, his face began to sweat, but not copiously. The superficial veins in other parts of the body were scarcely swelled; the cuticle was much wrinkled; and, at length, some degree of giddiness came on. After coming out, his pulse seemed slower than natural, and

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there was no sweat, but a copious perspiration.

At a hundred and two degrees, the pulse, in half an hour, was encreased thirty-two strokes in a minute; and the heat of the body was augmented four degrees. The face soon became flushed; and, after ten minutes continuance in the bath, sweat stood in drops upon it. On coming out, the person was put in a bed between blankets, and sweated profusely. But, in a short time, the pulse and heat of the body returned to the natural standard.

At a hundred and four degrees, the pulse and heat were as much increased in twenty minutes as in the last experiment after half an hour. When the water came up to the thorax, the breathing was frequent and laborious. The superficial vessels were much swelled, and the face very red, while the sweat ran down it in full streams. The cuticle continued smooth, and there was no remarkable anxiety; but, after twenty minutes, a slight vertigo ensued. The sweat, upon coming out of the bath, was very copious; and it was a quarter of an hour before the heat and pulse returned to the natural standard.

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At a hundred and six degrees, all the symptoms mentioned in the last experiment were much increased. The heat of the water was almost intolerable. A vertigo and confusion came on in five minutes; and, in a quarter of an hour, nausea and faintness ensued. On coming out, the sweat was still more copious than before. The heat of the body soon returned to its natural state; but, even after half an hour, the pulse still continued fuller and quicker than natural.

The effects of the pediluvium were nearly the same with those of the warm bath; but the changes from equal degrees of heat were less considerable. The vessels in the feet were soon swelled from it; but it required some time before any change took place in those of the hands.

After narrating these experiments, the author proceeds to consider the causes of the effects which have been pointed out. And, first, he treats of the changes induced on the simple solids. Of these, he thinks, the cuticle only is relaxed by the heat and moisture of the warm bath; for it seems to prevent watery fluids from passing it; and, even if they should pass, a cellular substance filled with oil would prevent their farther progress.

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The changes which warm bathing has, in general, been supposed to produce upon the blood, are an increase of its fluidity and its bulk. The first of these he allows may happen, both in consequence of an absorption of water, and of beginning putrefaction. He thinks, however, that it will, in most cases, be obviated by the secretions being increased. With regard to the increase of bulk, he entertains many doubts. He observes, that there is no rule by which we can, *a priori*, determine the expansibility of any fluid. Sauvages and Haller had endeavoured to determine this subject by experiments upon the blood put into a thermometer; from which they concluded, that it possessed but a small degree of expansibility. But our author is of opinion, that these experiments cannot be entirely trusted, as, in letting the blood, some portion of it, particularly an aerial matter, flies away. Upon this, however, its expansibility may depend. But, after all, he is inclined to believe, that the great swelling of the veins observable upon warm bathing cannot be solely produced by an expansion of the blood, but must, in some degree, be owing to a diminished tone of the containing vessels.

After this, he proceeds to consider the changes induced on the nervous system. He sets out
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with adducing some proofs, that a sympathy subsists between the extreme vessels and other parts; and, on this footing, proceeds to explain these changes. He is of opinion, that, by the immediate contact of warm water, the extreme vessels will be relaxed; and that this relaxation will, by sympathy, be communicated to other parts. Hence, the shrivelled skin, the soft and full pulse, the swelling of the veins, and the debility and increased sensibility of the nervous power. But this relaxation seldom occurs, without some appearance of a stimulus, which seems to depend upon the heat of the water. In consequence of this, the pulse becomes more frequent, the surface swells, and the excretions are increased. The frequent and laborious respiration depends, he thinks, on the rarefaction of the air in the lungs, which compresses the blood-vessels, and brings on a difficulty in the circulation, which can only be remedied by an increased inspiration.

Having thus endeavoured to point out, and explain the effects of the warm bath, the author next proceeds to treat of its use. As its only constant and considerable effects arise from a change in the vital solids, it is, he observes, from such a change alone that any indications can be drawn. The

two principal effects of this kind are stimulant and sedative.

As a sedative, the warm bath, he tells us, may be used, *1st*, To relax the extreme vessels, and, in consequence of that, the whole system. And, *2^{dly}*, To produce derivation to the surface, or to any particular part. With the first of these intentions, it is used, he tells us, in diseases arising from too little irritability, and in those which proceed from a contraction of the muscular fibres. To illustrate this, some observations are subjoined concerning the use of the warm bath in particular diseases. The diseases which he considers as arising from diminished irritability are melancholy and hypochondriasis. And those of which he treats as arising from increased contraction, are hysteria, epilepsy, tetanus, fever, small-pox, plague, haemorrhagy, phlegmasiae, amenorrhoea, ileus, calculus, and tussis convulsiva. From its power of producing derivation, it is useful, he tells us, in diseases depending on acrimony, and on altered determination. He illustrates the first of these by some remarks on its employment in cutaneous diseases, hydrophobia, and syphilis; and the last, by some observations on its use in diarrhoea and long continued catarrh.

As a stimulus, warm bathing, he observes, is used only to increase the nervous power, when morbidly diminished. To illustrate this, he offers some remarks on its employment in palsy, chronic rheumatism, and contracted limbs.

The author next proceeds to treat of the abuse of warm bathing. The inconveniences thence arising are derived from the same sources which are the foundation of its use, that is, from its stimulant and sedative powers. As a sedative, he observes, it is hurtful in chlorosis, amenorrhoea depending upon debility, and scurvy. In this view likewise, when the heat is much increased, it becomes hurtful in tetanus, hysteria, plague, and putrid fever. As a stimulus, it is hurtful where any of the viscera are obstructed, or where there are crudities in the primae viae. It is also to be forbid with those liable to haemorrhagies, and with pregnant women. The author farther observes, that Hoffman has remarked its producing fatal consequences after a fit of anger; and, lastly, he is of opinion, that it will be hurtful to asthmatics, from the difficulty of respiration which it occasions.

The last subject of which our author here treats, is the administration of the warm bath. This
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he observes, has in a great measure been considered already. If we wish for its sedative effects, he thinks, that the heat should not be more than 98 or 100 degrees, and that the patient should continue in it for an hour or longer. But, if a stimulus be wanted, the heat, he tells us, should at the first be 106 degrees, and, if possible, increased till some nausea or vertigo come on. When the warm bath is used in spasmodic cases, or to evacuate any morbid matter, the patient, he observes, on coming out of it, is in general directed to be laid in flannel; but, if this be disagreeable, his linen is ordered to be well dried and frequently changed. But shirts of cotton-cloth, he observes, probably possess the advantages of both.

S E C T. II.

Medical Observations.

I.

Cases of Putrid Fevers, in which fixed Air was injected into the Intestines, with apparent Advantage, by Thomas Percival, M. D. F. R. S. and S. A.

ABout twelve months since, my learned friend, the reverend Doctor Priestly, suggested to me the trial of fixed air in putrid fevers, administred under the form of clysters. And I was soon after favoured, by a gentleman of eminence in his profession at Leeds, with a very satisfactory history of the successful exhibition of this remedy, of which the following is an abridged account.

C A S E

C A S E I.

January 8. 1772. Mr L——, a young gentleman, was seized with a fever, which, after continuing about ten days, began to be attended with those symptoms which indicate a putrescent state in the fluids.

18. His tongue was black, he dozed much, his pulse was low, and beat 110 strokes in a minute, and his belly was loose.

20. His stupor increased, and he sometimes voided his urine and foeces without giving notice to his attendants. His skin was dry and harsh, but without petechiae; and his stools were hot, watery, black, and very foetid.

22. The preceeding symptoms continued with increased violence, and a subfultus tendinum came on, notwithstanding the use of the Peruvian bark, tormentil root, elixir of vitriol, tincture of roses, and every means which the skill or experience of his physicians could suggest. A different method of cure was, therefore, proposed and carried into execution. The patient was directed to drink freely of orange-wine, which retained its sweet-

ness, and was in brisk fermentation. The tincture of bark was continued, and the water which was mixed with it was impregnated with mephitic air from a large vat of fermenting wort. Instead of astringent clysters, air set free from an effervescing mixture of chalk and the acid of vitriol was injected by means of the instrument which is used for conveying the fumes of tobacco into the intestines.

23. His stools were less frequent; their heat and foetor were likewise considerably diminished; his stupor was much abated; and the subsultus tendinum had left him.

24. He was much better, and there seemed to be no necessity for repeating the clysters. The other means were continued.

25. All the symptoms of putrescency had left him; his tongue and teeth were clean; there remained no unnatural blackness or foetor in his stools; and the disagreeable odour of his breath and perspiration was no longer perceived. He began to take nourishment, and soon recovered his usual health and strength.

This striking proof of the efficacy of the injections of fixed air encouraged me to try them in
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the following deplorable case. And, though the disease proved fatal to the patient, it seems probable to me, and to another gentleman of the faculty who attended him, that his life was protracted, and his sufferings mitigated, by the continued use of this remedy.

C A S E II.

Mr W—— aetat. 44. corpulent, inactive, with a short neck, and addicted to habits of intemperance, was attacked, on the 7th of July 1772, with symptoms which seemed to threaten an apoplexy. On the 8th, a bilious looseness succeeded, with a profuse haemorrhage from the nose. On the 9th, I was called to his assistance. His countenance was bloated, his eyes heavy, his skin hot, and his pulse hard, full, and oppressed. The diarrhoea continued; his stools were bilious and very offensive; and he complained of griping pains in his bowels. He had lost, before I saw him, by the direction of Mr Hall, a surgeon of eminence in Manchester, eight ounces of blood from the arm, which was of a lax texture; and he had taken a saline mixture every sixth hour. The following

U 3

draught

draught was prescribed, and a dose of rhubarb directed to be administered at night.

℞ *Aq. Cinnam. ten. ʒi. Succ. Limon. ʒss. Salis Nitri gr. xii. Syr. e Succo Limon. ʒi. M. f. haust. 4is horis sumendus.*

July 11. The diarrhoea was more moderate, his griping pains were abated, and he had less stupor and dejection in his countenance; pulse 90, not so hard or oppressed. As his stools continued to be foetid, the dose of rhubarb was repeated; and, instead of simple cinnamon water, his draughts were prepared with an infusion of Columbo root.

12. The diarrhoea continued; his stools were involuntary, and he discharged in this way a quantity of black, grumous, and foetid blood. Pulse hard and quick; skin hot; tongue covered with a dark fur; abdomen swelled; great stupor. Ten grains of the Columbo root, and fifteen of the gummi rubrum astringens were added to each draught. Fixed air, under the form of clysters, was injected every second or third hour, and directions were given to supply the patient plentifully with water artificially impregnated with mephitic air. A blister was also laid between his shoulders.

13. The

13. The diarrhoea continued, with frequent discharges of blood; but the stools had now lost their foetor. Pulse 120; great flatulence in the bowels, and fulness in the belly. The clysters of fixed air always diminished the tension of the abdomen, abated flatulence, and made the patient more easy and composed for some time after their injection. They were directed to be continued, together the medicated water. The nitre was omitted, and a scruple of Confect. Damocratis was given every fourth hour in an infusion of Columbo root.

14. The diarrhoea was now checked. His other symptoms continued as before. Blisters were applied to the arms; and a dram and a half of the tinctura serpentariae was added to each draught.

15. His pulse was quicker, more irregular, and feeble. He dozed much, talked incoherently, and laboured under a slight degree of dyspnoea. His urine, which had hitherto assumed no remarkable appearance, now became pale. Though he discharged wind very freely, his belly was much swelled, except for a short time after the injection of the air-clysters. The following draughts were then prescribed,

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R. Cam-

℞. *Camphorae*, *Mucilag. G. Arab. solutae* gr. viii.
Infus. Rad. Cohumb. 3iss. Tinct. Serpent. 3ii.
Confect. Card. 3i. Syr. Cort. Aurant. 3i M.
f. haust. 4is horis sumendus.

Directions were given to foment his feet frequently with vinegar and warm water.

16. He has had no stools since the 14th. His abdomen is tense. No change in the other symptoms. The *Tinct. Serpent.* was omitted in his draughts, and an equal quantity of *Tinct. Rhei Spt.* substituted in its place.

In the evening, he had a motion to stool, of which he was for the first time so sensible, as to give notice to his attendants. But the discharge, which was considerable and slightly offensive, consisted almost entirely of blood, both in a coagulated and in a liquid state. His medicines were, therefore, varied as follows.

℞. *Decoct. Cort. Peruv. 3iss. Tinct. Cort. ejusd.* 3ii.
Confect. Card. 3i. Gum. Rub. astring. gr. xv.
Pulv. Alumin. gr. vii. M. f. haust. 4is horis sumendus.

Red

Red port-wine was now given more freely in his medicated water, and his nourishment consisted of fago and falep.

In this state, with very little variation, he continued for several days, at one time costive, and at another discharging small quantities of foeces, mixed with grumous blood. The air-clysters were continued, and the astringents omitted.

20. His urine was now of an amber colour, and deposited a slight sediment. His pulse was more regular, and, although still very quick, abated in number ten strokes in a minute. His head was less confused, and his sleep seemed to be refreshing. No blood appeared in his stools, which were frequent, but small in quantity; and his abdomen was less tense than usual. He was extremely deaf; but gave rational answers to the few questions which were proposed to him; and said he felt no pain.

21. He passed a very restless night; his delirium recurred; his pulse beat 125 strokes in a minute; and his urine was of a deep amber colour when first voided; but, when cold, it assumed the appearance of cow's whey. The abdomen was not very tense, nor had he any farther discharge

charge of blood. Directions were given to shave his head, and wash it with a mixture of vinegar and brandy; the quantity of wine in his drink was diminished, and the frequent use of the pediluvium was enjoined. The air-clysters were discontinued, as his stools were not offensive, and his abdomen less distended.

22. His pulse was now small, irregular, and beat 130 strokes in a minute. The dyspnoea was greatly increased; his skin was hot, and bedewed with a clammy moisture; and every symptom seemed to indicate the approach of death. In this state he continued till evening, when he recruited a little. The next day he had several slight convulsions. His urine, which was voided plentifully, still put on the appearance of whey when cold. Cordial and antispasmodic draughts, composed of camphor, tincture of castor, and spt. vol. aromat. were now directed; and wine was liberally administered.

24. He rose from his bed, and, by the assistance of his attendants, walked across the chamber. Soon after he was seized with a violent convulsion, in which he expired.

To adduce a case which terminated fatally, as a proof of the efficacy of any medicine recommended to the attention of the public, may perhaps appear singular. But it cannot be deemed absurd, when that remedy answered the purposes for which it was intended. For, in the instance before us, fixed air was employed, not with an expectation that it would cure the fever, but to obviate the symptoms of putrefaction, and to allay the uneasy irritation in the bowels. The disease was too malignant, the nervous system too violently affected, and the strength of the patient too much exhausted by the discharges of blood which he suffered, to afford hopes of recovery from the use of the most powerful antiseptics.

But, in the succeeding case, the event proved more fortunate.

C A S E III.

Elizabeth Grundy, aged seventeen, was attacked, on the 16th of December 1772, with the usual symptoms of continued fever. The common method of cure was pursued; but the disease

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increased, and soon assumed a putrid type. On the 23d, I found her labouring under a constant delirium, with a *subfultus tendinum*. Her skin was hot and dry, her tongue black, her thirst immoderate, and her stools frequent, extremely offensive, and for the most part involuntary. Her pulse beat 130 strokes in the minute; she dosed much, and was very deaf. I directed wine to be administered freely, a blister to be applied to her back, the pediluvium to be used several times in the day, and mephitic air to be injected under the form of a clyster every two hours. The next day her stools were less frequent, had lost their foetor, and were no longer discharged involuntarily; her pulse was reduced to 110 strokes in the minute, and her delirium was much abated. Directions were given to repeat the clysters, and to supply the patient liberally with wine. These means were assiduously pursued for several days; and the young woman was so much recruited by the 28th, that the injections were discontinued. She was now quite rational, and not averse to medicines. A decoction of Peruvian bark was therefore prescribed, by the use of which she speedily recovered her health.

CASES

II.

CASES *on different Subjects, by Dr Manget, Physician at Geneva.*

CASE I. *The Progress of the Small Pox from Inoculation retarded by the Measles.*

In the month of February 1772, I inoculated a child according to the Suttonian method. The eruption appeared on the seventh day. Altho' the weather was very cold, the boy remained, in general, in the open air, as he found it relieved him from the anxiety which accompanied the eruption. After two days of variolous fever, a new eruption appeared perfectly distinct from the former. This I soon discovered to be the measles. I then advised that he should no longer be exposed to cold air. But, from his impatience under confinement, this was not complied with. The measles, however, kept out well; and, about the end of the fourth day, terminated by desquamation, without any bad consequence. It was remarkable, in this case, that the suppuration of the small-pox, which had begun before the measles appeared, was totally suspended, and did not again renew its course till they were finished.

nished. By this means, the continuance of the small-pox was prolonged about four days beyond the usual period of that disease.

CASE II. *A Suppression of Urine, from Pus compressing the Neck of the Bladder.*

A man was attacked with an inflammation of the abdomen, between the peritoneum and muscles of the lower belly. After continuing for some time, it terminated in suppuration. The pus made its way down towards the neck of the bladder; which it compressed in such a manner as to occasion a violent retention of urine, and absolutely to prevent the introduction of a catheter into the bladder. I was consulted with regard to the retention of urine. And, without knowing the cause of the obstruction, I advised that a puncture should be made into the bladder by the rectum. So soon as this was done, there issued from the anus a large collection of pus, upon which all the complaints ceased, and the patient is since perfectly recovered.

CASE III. *A locked Jaw from a Nerve being pricked by a false Tooth.*

A lady, after five days illness, lately died here of a convulsion of the lower jaw, which was occasioned

caſioned by a nerve being pricked in the ſocket of one of her teeth, from a ſlight ſtroke upon a falſe tooth, which had been introduced into that ſocket. Her complaints began with pain and ſwelling in the jaw, which the phyſician who attended her imagined to be rheumatic. Upon this, a bliſter was applied; but the evil increaſed, the jaw became immoveable, and deglutition was entirely prevented. Recourſe was then had to bathing, bleeding, fumigations, emollient cataplaſms, embrocations, and laudanum; but all to no purpoſe. In ſpite of every thing that was done, ſhe died in excruciating pain. I informed her phyſician of a cure which I had made in a caſe ſomewhat ſimilar, about eight days before. A young man was brought to the hoſpital, affected with a locked jaw, upon which tetanus had ſupervened. Theſe complaints happened from a nerve being pricked in the arm, in conſequence of bleeding. After, in vain, trying all the ordinary methods of cure, for the ſpace of eight days, I at length employed mercurial friction, which was followed by the moſt happy effect.

SECT.

S E C T. III.

Medical News.

AN analysis of cream of tartar has lately been published by Mr Schele, in the third part of the Swedish Transactions for the year 1770. Many opinions, before very generally received in chemistry, are rendered doubtful, from his experiments on this subject. We here subjoin a short account of the chief of these,

If cream of tartar be dissolved in a sufficient quantity of boiling water, and fine chalk in powder added to it, till the effervescence ceases, a copious white sediment will fall to the bottom, and the liquor which remains over it will, by evaporation, afford soluble tartar. This proves, that cream of tartar is not, as has commonly been supposed, an acid joined with impurities; but that it is really a compound salt, containing an alkali
joined

joined with an acid. It farther proves, that the alkaline salt, obtained from cream of tartar by de-flagration, is not generated in the fire, but was actually pre-existent in the tartar.

The white sediment obtained in the above experiment, is the calcareous earth combined with the acid of tartar, and may justly be called Selenites Tartareus. From this it appears, that the effect which is produced by the addition of chalk to a solution of cream of tartar is, to carry to the bottom that portion of acid which the cream of tartar contains in a higher degree than is necessary to saturate its alkali; and that cream of tartar is a compound salt in which the acid is superabundant.

If, upon the selenites tartareus, obtained by the former experiment, a quantity of vitriolic acid in a diluted state be poured, the vitriolic acid, uniting with the calcareous earth, forms a gypsum, and the liquor which stands over it is pure acid of tartar. This acid of tartar may, by inspissation, be made stronger, and may be even formed into small white crystals, which do not suffer deliquescence in the open air. Thus it appears, that the acid of tartar can, even by itself, exist in a solid state.

Cream of tartar may be artificially made in the following manner: Upon fixed vegetable alkali, pour a quantity of the acid of tartar, obtained in the manner pointed out in the last experiment. Continue this till the effervescence be over; the fluid will then be transparent. But, if more of the acid of tartar be added, it will become turbid, and white, and small crystals like white sand will concrete in it, which are a perfect cream of tartar. The cream of tartar thus formed, may again be decomposed in the manner already mentioned. If the acid of tartar be poured upon volatile, instead of fixed alkali, a kind of cream of tartar will be formed, which is almost as difficultly dissolved in water as common cream of tartar.

These experiments have been repeated by Dr Black, Professor of chemistry at Edinburgh, and have turned out in the same manner as is here represented. Dr Black has farther discovered, that if, instead of chalk, a certain proportion of quick-lime be added to the solution of cream of tartar, the whole acid will be absorbed by the lime, and the liquor found above the sediment will, in that case, contain alkali alone.

The

The following particulars, concerning the celebrated Dr Astruc, are extracted from the *Leipfic Commentaries*, vol. 17. part 2.

John Astruc was born in the year 1684, at the little town of Savoy, in the province of Languedoc. His father, who was a protestant clergyman, bestowed particular pains upon the earliest part of his education. After which, he went to the university of Montpellier, where he was created master of arts in the year 1700. He then began the study of medicine; and, in two years, obtained the degree of batchelor, having, upon that occasion, written a dissertation on the cause of fermentation, which he defended in a very spirited manner. On the 25th of January 1703, he was created doctor of physick; after which, before arriving at extensive practice, he applied to the study of medical authors, both ancient and modern, with uncommon assiduity. The good effects of his study soon appeared; for, in the year 1710, he published a treatise concerning muscular motion, from which he acquired very high reputation. In the year 1717, he was appointed to teach medicine at Montpellier, which he did with such perspicuity and eloquence, that it was universally said, he had been born to be a profes-

for. His fame soon rose to such a height, that the King assigned him an annual salary, and he was, at the same time, appointed to superintend the mineral waters in the province of Languedoc.

But, as Montpellier did not afford sufficient scope for his aspiring genius, he went to Paris with a great stock of manuscripts, which he intended to publish, after subjecting them to the examination of the learned. Soon after, however, he left it, having, in the year 1729, accepted the office of first physician to the King of Poland, which was then offered to him. His stay there was but of short duration, and he again returned to Paris.

Upon the death of the celebrated Geoffroy in the year 1731, he was appointed Regius Professor of medicine at Paris. The duties of this office he discharged in such a manner, as to answer even the most sanguine expectations. He taught the practice of physic with so great applause as to draw from other universities to that of Paris, a great concourse of medical students, foreigners as well as natives of France. At the same time, he was not more celebrated as a professor than a practitioner. And, even at an advanced age, he persisted with unwearied assiduity in that intense study

dy which first raised his reputation. Hence it is, that he has been enabled to transmit to posterity so many valuable monuments of his medical erudition. He died, universally regreted, on the 15th of May 1766, in the 82 year of his age.

An eminent practitioner at Leyden has of late used the oculi cancrorum with great success in the cure of fluor albus. He gives this medicine to the quantity of half an ounce in a day, and observes, that it is particularly serviceable in that species of fluor albus where the acrimony of the discharge is so great as to corrode the parts.

A celebrated lecturer in London alledges, that alkaline substances in general possess a lithontriptic power. Not that, when taken internally, they are really applied to stones in the urinary passages in such a state as to be capable of dissolving them; but because they possess a power of depriving the urine of its petrifying property, and reduce it more to the state of a watery fluid. As a proof of this, he alledges, that the urine of a man, who has for a considerable time taken an alkali, whether caustic or not, deposits no sediment, and forms no incrustations in the pot. Hence he concludes,

X 3

that,

that, for the cure of stone, the efficacy of the medicine will be little altered by its being given in a mild or caustic state. He advises, therefore, that, when alkali is to be employed for the cure of the stone, causticity should always be avoided; because it is not only apt to disagree with the stomach, but likewise obliges us to employ the alkali in small doses.

Considerable benefit has lately been obtained at Edinburgh from the internal use of the cicuta in some cancerous cases. It is observed, that the extract is much more powerful when prepared from the seeds, than when prepared from the leaves; and that the cicuta has seldom a good effect, unless it be carried to such a height as to produce a slight degree of giddiness.

The Professors of medicine at Edinburgh have lately received a letter from Mr James Ker, a surgeon in Bengal, in which he gives them a particular account of the preparation of the terra Japonica. From this letter it appears, that the terra Japonica is not obtained, as has commonly been imagined, from a species of the palm tree, but from a species of the mimosa, which grows in great abundance in the kingdom of Bahar. It is prepared from a decoction of the
inner

inner part of the wood. From the negligent method in which it is dried in little kilns dug for that purpose, it acquires the earthy appearance which it in general has. In the kingdom of Bahar, besides being much used in medicine, it is employed for many purposes in arts, particularly, for painting the beams of houses to defend them against vermin.

A faithful and minute register of deaths, and of the various diseases most fatal at particular ages in different places, must evidently be of great importance to physicians in their endeavours to relieve the miseries of human nature.

It is much to be regreted, that this subject has not hitherto been attended to with that accuracy which its importance merits. But it is with particular pleasure we can inform our readers, that a bill of mortality in the city of Chester, for the year 1772, has been drawn up, with all the precision that could be desired. It consists of two tables; the first, of deaths; the second, of diseases. From the table of deaths, we learn, not only the number that have died at different ages, but likewise their situation in life, whether they be males or females, batchelors, husbands, widowers,

X 4

maids,

maids, wives, or widows. In the second table, the diseases are arranged according to the order adopted in Dr Cullen's Nosology; and, opposite to each disease, we find the number that have died of it at every particular age.

It is greatly to be wished that an example, so worthy of imitation, were followed in other parts of Britain. And it should be remembered, that although this subject equally claims the attention of the philosopher and politician, yet, under the direction of the physician, it can be carried into execution with greatest advantage to mankind.

In a letter from Dr Rush, professor of chemistry in Philadelphia, to Dr Duncan physician in Edinburgh, the following account is given of a new anthelmintic medicine. "It has long, says he, been a complaint among physicians, that we have no worm-medicine which can be depended upon. Even calomel fails in many cases where there are the most pathognomonic signs of worms in the bowels. But this complaint, it is to be hoped, is now at an end. The physicians in Jamaica have lately found, that the bark of the summit of the cabbage-tree, made into

into a fyrup with brown fugar, is an infallible antidote to them. I have used above thirty pounds of it, and have never found it fail in one instance. The fyrup is pleafant. It fometimes pukes, and always purges, the first or fecond time it is given."

Since the publication of Mr Duguid's letter to Dr Monro, in the second volume of the Physical and Literary Eflays, the bark of the cabbage-tree has been used as an anthelmintic by several practitioners in Edinburgh. But they have in general complained of the violence of its operation, both as an emetic and cathartic. This fyrup, it would appear, is equally efficacious with the decoction of the bark, without being liable to the same objection.

On Wednesday the 5th of May, Dr Alexander Monro-Drummond was unanimously elected Professor of the Institutions of Medicine in the University of Edinburgh, that office being vacant by the appointment of Dr Cullen to fucceed the late Dr Gregory as professor of practice.

-S E C

S E C T. IV.

A List of new Books.

Observations on Epidemic disorders, with remarks on nervous and malignant fevers. By James Sims, M. D. 8vo, London.

A new inquiry into the causes, symptoms, and cure of putrid and inflammatory fevers, with an appendix on the hectic fever, and on the ulcerated and malignant fore throat. By William Fordyce, M. D. 8vo, London.

An easy way to prolong life, by a little attention to what we eat and drink. Collected from the authorities of our ablest physicians. By a medical gentleman, 8vo, London.

Observations upon lightning, and the method of securing buildings from its effects, in a letter to Sir Charles Frederick. By Benjamin Wilson, F. R. S. 4to, London.

The present practice of midwifery considered, 8vo, London.

The inefficacy of all mercurial preparations in the cure of venereal and scorbutic disorders, proved
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ved from reason and experience. By Henry Saffroy, surgeon, and member of the corporation of surgeons in London, 8vo, London.

Dictionnaire mineralogique et hydrologique de la France. Tom. 2. 8vo, Paris.

Methode familiere pour guerir les maladies veneriennes, avec le recettes des remedes qui sont propres. Par M. le Fevre, M. D. 12mo, Amsterdam.

Essais, ou reflexions intereffantes relatives a la chymie, la medecine, l'oeconomie, et le commerce; avec une dissertation sur la question, Si les causes des les maladies de l'ame, et de nerfs, ont toujours leur siege dans le cerveau? Par M. Oth. Cuil. Struve, 12mo, Laufanne.

Le sommeil des plantes, et la cause du mouvement de la sensitive expliquée. Par M. J. Hill, dans une lettre a M. de Linné, Professeur de Botanique a Upsal; traduit de l'Anglois, 8vo, Geneve.

Collettione istorico di caso chirurgicale. Per M. J. Cavalliné. Florence.

A short account of a society at Amsterdam, instituted in the year 1767, for the recovery of drowned

drowned persons ; with observations, shewing the utility and advantage which would accrue to Great Britain from a similar institution, extended to cases of suffocation by damp in mines, choaking, strangling, stifling, and other accidents. By Alexander Johnston, M. D. 8vo, London.

Richardi Mead Monita et praecepta medica, permultis annotationibus et observationibus illustrata, auctore Clifton Wintringham, M. D. C. M. L. et R. S. socio, Equite aurato, et medico regio olim et valetudinarii provisi in usum Britannorum apud exteras gentes bella gerentium medico et praefecto, in 2. tom. 8vo, Londini.

Medical consultations on various diseases, published from the letters of Thomas Thompson, M. D. physician to his late Royal Highness Frederick Prince of Wales, 8vo, London.

A description of the human eye, and its adjacent parts, together with their principal diseases, and the methods proposed for relieving them, by Joseph Warner, F. R. S. and senior surgeon to Guy's Hospital, 8vo, London.

Free thoughts on apothecaries and empyrics, With an appeal to the impartial public, recommending

mending a different mode of paying apothecaries, 8vo, London.

Considerations on the use of injections in the gonorrhoea, by William Cribb surgeon in High Holborn, and member of the corporation of surgeons in London, 8vo, London.

Medical essays. By John Armstrong, M. D. physician to his Majesty's army, 4to, London.

De anima medica praelectio ex Lumleii et Caldwelli instituto, in theatro collegii regalis medicorum Londinensium ad socios habita die Decembris 16to, anno 1748. A Fran. Nichols, M. D. F. R. S. et Med. Reg. ord. Editio altera, notis amplioribus aucta. Cui accessit disquisitio de motu cordis et sanguinis in homine nato et non nato, tabulis illustrata, 4to, London.

Traité des eaux minerales de Verdufan, connues sous le nom d'eaux minerales de Casterra Vivent ; avec leur analyse, leur propriété, et leur usage dans les maladies, fait par ordre du gouvernement. Par M. Raulin, M. D. membre de la société royal de Londres, &c. 12mo, Paris.

Opuscules mathematiques, ou memoires sur differents sujets de geometrie, de mechanique, d'optique, d'astronomie, &c. par M. d'Alembert

de

de l'academie royale de sciences, secretaire perpetuel de l'academie Françoise, 8vo, Paris.

Beobachtungen und muthmassungen, &c. *i. e.* Considerations and reflections on the *aurorae boreales*. By M. J. E. B. Weideburg, Jena.

Dschurnal fur die liebhaber des steinreichs, &c. *i. e.* A journal for the lovers of lithology and conchyology. By M. J. S. Schraeter, tom. I. Weymar.

Observationes botanicae. Auctore Christ. Ehrenfred Wiegel, M. D. Graffvald.

Bericht und bedenkin die kriebelkrankheit betreffend, &c. *i. e.* Advice and consultations concerning the *Raphania*, sent by the physicians at Schellwig to the royal chamber at Copenhagen, with an answer from the college of physicians there. Copenhagen.

Acta Helvetica physico-mathematico-botanico-medica, vol. 7. 4to, Basse.

Ludwig's abhandlung von den erd. aepfelen. &c. *i. e.* A dissertation on potatoes. By A. J. Ludwig. Berne.

Vermischte beobachtungen, &c. *i. e.* Miscellaneous observations on the practice of physic. By Dr Hirschel. Berlin.

Dis-

Differtationes medicae, quas ex auctoritate reverendi admodum viri, Gulielmi Robertfon, SS. T. P. Academiae Edinburgenae Praefecti; nec non amplissimi senatus academici consensu, et nobilissimae facultatis medicae decreto; pro gradu doctoratus, summisque in medicina honoribus et privilegiis rite et legitime consequendis; eruditorum examini subjecerunt,

Bartholomaeus Parr, Britannus, De Balneo.

Georgius Logan, Carolinensis, De morbis infantium arcendis et curandis.

Gulielmus Ball, Virginienfis, De tabe mesenterica.

Josephus Dimisdale, Britannus, De morbis cutaneis.

Gulielmus Hamilton, Britannus, De anasarca.

J. Daniel Knolton, Philadelphienfis, De pertussi.

Joannes Taylor, Anglus, De causis respirationis difficilis.

Henricus Hart, ex Insula Sancti Christophori, De anasarca.

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M E D I C A L
A N D
P H I L O S O P H I C A L
C O M M E N T A R I E S.

By a SOCIETY in EDINBURGH.

Perlege quodcunque est. Quid epistola lecta nocebit?

Te quoque, in hac aliquid, quod juvet, esse potest.

His arcana notis terra pelagoque feruntur.

OVID.

VOLUME FIRST.

PART IV.

L O N D O N

Printed for J. MURRAY, No. 32. Fleet-street;
KINCAID & CREECH, and W. DRUMMOND, *Edinburgh*;
and T. EWING, Capel-street, *Dublin*.

M, DCC, LXXIII.

M. E. D. I. C. A. L.

PHILOSOPHICAL

COMMENTARIES

THESE COMMENTARIES
ON THE PHILOSOPHY OF
NATURE, IN TWO VOLUMES,
BY
J. H. MURRAY, ESQ.

VOLUME FIRST

PART IV

L O N D O N

Printed for J. Murray, No. 3, Pall Mall,
by J. & C. Smith, and W. Dorman, in Strand,
and T. Evans, Capel Court, Strand.

M D C C L X I I I

M E D I C A L

C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

Caroli Strack, M. D. *et in Univers. Mogunt.*
Institut. Med. Professor. &c. Observationes
Medicinales de Colica Pictonum, maximeque ob
Arthritidem. 12mo, Francofurti.

IN the year 1765, Dr Strack threw out some conjectures with regard to the colica pictonum, which were published in the Journal de Medecine of Paris. The many observations which, since that time, have occurred to him on this subject, have served to confirm his former opinion, and have induced him to publish professedly upon

it. He sets out with observing, that many different opinions have been entertained with regard to the cause of this disease. By some, it has been alledged to arise from lead and its preparations; by others, from copper, antimony, and different paints; and by a third set, from acid apples and pears, or the liquors prepared from them. In consequence of these varieties in opinion, different names have been assigned to this disease, and different plans of cure have been proposed. Our author, having observed many people attacked with this disease, who had never been exposed to any of these causes, was led to form another opinion. He thinks that the colica pictonum is in general to be ascribed to the deposition of gouty matter on the intestines, and that the cure is to be regulated accordingly. In confirmation of this opinion, and of the propriety of the practice founded upon it, we are, in the second chapter, presented with an account of near twenty cases successfully treated.

The different cases which he has related are very much similar to each other. In most of them, the symptoms of violent colic, alternating with fixed pains in the extremities, had recurred at uncertain intervals for many years. From all these symptoms,

symptoms, the author informs us, his patients were perfectly relieved by the use of warm bathing, the decoction of woods, and crude antimony.

After this confirmation of his own opinion, our author, in the third chapter, proceeds more particularly to examine the opinions entertained by others. To prove that the colica pictonum does not arise from copper, as some have supposed, he adduces two cases in which copper was taken, where there arose violent colics indeed, but by no means of that kind which is the subject of this dissertation.

He is of opinion, that the Devonshire colic, which he allows to be the true colica pictonum, has been improperly ascribed to cyder, as, in many countries where cyder is very much used, this disease is hardly known to exist. Neither can he agree to the opinion of Tronchin, that this disease arises from antimony, as he has found antimony a powerful remedy for it.

In the last place, he examines the opinion of its arising from lead. In support of this, Henc-
kel, Baker, de Haen, and many other able au-
thors, have written. To this cause, however, our
author objects, that he has had opportunities of
seeing numbers exposed to the steams of lead,

who were never affected by it, and that it has often been remarked to be contagious ; which he himself had a particular opportunity of observing in the city of Mentz, in the year 1770. These circumstances, he thinks, are inconsistent with the supposition of its arising from lead. He allows, however, upon the authority of those facts adduced by the writers above mentioned, that one species of the *colica pictonum* may arise from lead ; but he observes, that all those which have fallen under his own observation were evidently to be ascribed to arthritic miasmata. In the fourth chapter, therefore, he proceeds to point out those marks by which this species of the *colica pictonum* may be distinguished.

When violent pain in the extremities, after producing tophi in the articulations, and leaving its former seat suddenly, attacks the belly, the disease, he tells us, is obvious. But, if the pain attack the belly in the beginning, it is not so easy to distinguish whether it arises from gout or not. The chief marks which he points out for this purpose are the following : The absence of other causes which may be supposed capable of inducing the disease ; the absence of the symptoms of fever and inflammation ; a yellowish or olive complexion ;

plexion ; a lead-coloured ring round the eyes ; difficulty of breathing, and great weariness after slight exercise ; a greater degree of fatigue after sleeping than before it ; the sweat burning the skin in the same manner as if it had been covered with warm ashes ; a miliary eruption without any manifest cause ; a sense of titillation on the brow, as if a small insect were creeping upon it ; and the urine of a whey-colour, depositing a white, light, fatty sediment.

The author concludes this treatise with some observations on the different exits which gouty matters find from the body ; as, by attention to these, we can best determine by what means the disease must be cured. The chief exits, he tells us, are by sweat, urine, or an abscess, very rarely by stool. When there is any tendency to a discharge in the first of these ways, he strongly recommends aromatic decoctions, warm bathing, and crude antimony.

When gouty matter finds an exit by the urine, the author tells us, that the urine discharged is in general of a whey-colour, or resembles water with a mixture of milk in it. When this happens, he recommends the employment of diuretics. An-

other manner in which the gout terminates, is, he tells us, in the way of abscess. When this happens, he advises that the ulcer be kept long open, and that, in the mean time, those remedies be employed which have already been recommended as serviceable in the gout.

II. Chi-

II.

Chirurgical Observations and Cases, by William Bromfeild Surgeon to her Majesty, and to St George's Hospital. 2 vols, 8vo, London.

IT is universally allowed, that, of late years, the art of surgery has been much improved. In the treatise now before us, the author sets out with assigning many reasons for these improvements. After this, he strongly recommends the use of sudorific opiates in concussions of the brain. Those which he proposes are Dover's powder, and a mixture of antimonial wine and thebaic tincture, which he terms the *tinctura anodyna antimonialis*. To this practice he was led, from being informed, that, in concussions of the brain, and fractures of the skull, sudorifics had been successfully employed by an empiric; from observing that the common method of treating these complaints by repeated blood-letting in general proves fatal; and from reflecting that opium, by removing spasm, may take off inflammation, and, by attenuating the blood, may promote absorption. In

con-

confirmation of the propriety of this practice, four cases are subjoined, in which it was useful.

Mr Bromfeild next points out the advantages of intercostal issues in complaints of the thorax. Where there is a fixed pain in the thorax, he advises that a drain be made in the interstice between two ribs, as near the seat of the pain as possible. When there is no fixed pain, he recommends an issue between the sixth and seventh of the true ribs, about half way between their articulation with the vertebrae, and their connection with the sternum. He likewise recommends issues for the discharge of humour from the brain; but he dissuades us from the practice, which has often been recommended, of applying caustics on the sagittal suture. Where, in consequence of violent concussions, symptoms remain which may be supposed to proceed from extravasation, he recommends, as the best mode of discharge, an incision along the aditamentum of the temporal suture.

In the second chapter, the author treats of amputation. On this subject, he sets out with some remarks on the causes which may require the operation. In mortification of the extremities, he dissuades us from having recourse to the operation,

on, till a suppuration be come on. Where amputation is performed for an abscess or caries in the joint, he advises an issue in the other extremity, before the stump be healed. He cautions us against being hasty in performing amputation for compound fractures, as he has seen cases, which appeared very desperate, cured by the use of long splints. When amputation is proposed for white swellings, he advises that inquiry should be made with regard to the cause of the complaint; and, if it be found to proceed from a scrophulous habit, he dissuades us from having recourse to the operation, as the disease will infallibly break out in some other part.

In a subsequent part of this treatise, some observations are offered on the operation of amputation, an account of which may not be improper in this place. After a minute description of the necessary apparatus, and of the different steps of the operation, he treats of the methods of obviating a haemorrhage. He warmly recommends the tenaculum, in preference to the needle, for taking up vessels, as, by this means, the nerve will not be included with the artery, and a train of dangerous and disagreeable symptoms avoided. Instead of a slip of linen, for pulling up
the

the muscles while we apply the saw, he recommends a piece of leather, about sixteen or eighteen inches long, and of a proportional breadth, which is less apt to entangle the teeth of the saw.

In amputating below the knee, the author advises us to save as much of the leg as possible, as by this means a leather leg may be used, and the motion of the knee preserved, which he esteems much preferable to resting the knee upon a wooden leg. Hence he directs, that, unless in cases of compound fractures, where there is reason to suspect that the bone is splintered higher than the place where the wound is made, the leg should always be taken off as near the ankle as circumstances will admit.

Mr Bromfeild likewise proposes a method of amputating at the shoulder, which is much the same with that of Mr de La Faye. He recommends, however, that the external flap should be made shorter than De la Faye had proposed; and, contrary to all former opinions, directs, that the blood-vessels should be left very long; as by this means the nutrition of the shoulder will be preserved, while at the same time no inconvenience will arise from the length of the vessels, as from
their

their elasticity they will soon retire within the flesh.

In the third chapter, the author treats of tumours. These, he observes, have been classed under two general heads; tumours from fluxion, which comprehend all those of the inflammatory kind; or from congestion, which comprehend the indolent swellings. The cure, he observes, is to be attempted, either by dispelling them, or by bringing them to suppuration. With the first intention he recommends gentle antiphlogistic purgatives, and saturnine applications to the part affected. In forwarding suppuration, he observes, that, from violent circulation, sphacelus will ensue; and, on the contrary, from languid circulation, an anthrax. The pulse therefore will chiefly direct us, both with regard to evacuations, and the proper regimen. He is of opinion, that the seat of circumscribed abscesses is in the adipose, and not, as has generally been imagined, in the cellular membrane. Abscesses, when formed, are to be opened either by incision or caustic. Each of these methods he tells us, will, from circumstances, at different times, claim the preference. In large abscesses, caustics cannot be applied to the whole extent of the tumour, and in small ones they

they will destroy more of the skin than we would wish. But, in indolent tumours, large caustics, from the tendency which they have to promote suppuration, are to be preferred. The author concludes this subject, by laying it down as a general rule in all operations in surgery, to save as much of the sound skin as is possible, and not to leave any part of that which is diseased.

The subject of the fourth chapter is Erysipelas. The general plan of treating erysipelas is to abate the inflammation by bleeding, cooling purges, and an antiphlogistic course. But, previous to this, Mr Bromfeild recommends that the cause of the disorder be inquired into, and, if it be critical, it is by no means to be repelled. He tells us of an erysipelas of the head, which was epidemic for two years, in which it was necessary to employ cordials and the Peruvian bark; as an antiphlogistic course very generally proved fatal.

Mr Bromfeild next treats of the anthrax, which he tells us has generally been defined, a highly inflammatory tumour, the effect of pestilential particles lodged in the blood. He divides these tumours into the pestilential and non-pestilential. And these last he again subdivides into those which proceed from a quantity of highly inflamed blood,

blood, and those which are the effect of a putrid and malignant fever. It is with regard to these two species only, that our author has had an opportunity of making any observations; and the treatment adapted to each is, he tells us, extremely different. In the malignant, the primæ viæ should be duly emptied, and then recourse must be had to antiseptics, cordials, and volatiles. The non-malignant require large and repeated evacuations, as well as a general antiphlogistic regimen. But, even in this species, if, after the tumour comes to suppuration, it discharge a thin ichor, the Peruvian bark is, he tells us, almost always a specific.

In the sixth chapter, the author treats of the reduction of the os brachii when dislocated. The frequency of dislocations here, he ascribes to the particular apparatus of the joint, and the exposure of the top of the shoulder to accidents. The head of the os brachiale, he observes, when dislocated, will sometimes be thrown into the axilla; at other times, under the pectoral muscle and clavicle; sometimes outward and backward, but rarely upward. After enumerating the species of dislocation, the author next points out the signs by which dislocation is to be discovered, and the
common

common methods practised for reduction. One of the principal circumstances which he suggests as an improvement here, is, that the scapula be pushed directly backward, in place of forward and downward, as has commonly been directed. There are some cases, in which dislocations of the arm, though easily reduced, will, from laxity of the muscles passing over the shoulder-joint, happen again, in consequence of the slightest accident. In these, besides proper support for a considerable time, the author directs the repeated application of blisters round the shoulder.

The first volume is concluded with an appendix, containing miscellaneous observations, which seem chiefly to have been introduced with a view of confirming the preceding doctrines.

The author sets out, in the second volume, with treating of the diseases of the bones. He first considers what is usually called pain in the bones. This he refers to an affection of the periosteum, as he considers the bones as altogether insensible, and consequently not liable to pain. This affection he divides into two kinds, the venereal and the rheumatic: In the former, the pains are only severe in the night, and are, in general, confined to the most solid part of the cylindrical bones; whereas,

whereas, in the latter, they are almost constant, and more frequently attack the joints or large ends of bones. He ascribes caries to a division of the nutrient vessels of the bones, either by external injury, or an acrimonious state of the fluids. Where the desquamation of a carious bone is expected to be tedious, the cure, he tells us, may frequently be hastened, by taking out the diseased parts with the head of a trepan, attending, however, at the same time, to the general habit, by the use of proper medicines internally.

Tumours of the bones often arise from venereal causes, and are denominated tophi, gummi, or nodes. The tophi, Mr Bromfeild tells us, arise from a chalky substance, deposited between the osseous fibres of the bones, while the nodes are owing to an inspissated humour obstructing the nutrient vessels of the bones, but without extravasation. In the last case, when the periosteum is thickened, but the bone itself not affected, a course of mercury, he informs us, will often produce a perfect cure. The very violent pain, which sometimes accompanies swellings of this kind, and which probably proceeds from the extension of the periosteum, will almost always be relieved by a simple incision through that mem-

brane, for the whole length of the node. Such an incision, he alledges, will seldom be attended with exfoliation, which the tedious method of destroying these tumours by caustic is very ready to induce.

In the spina ventosa, the seat of the disease, according to our author, is in the medulla of the bone. It becomes inflamed, in consequence either of an internal cause, or external injury. Matter is at last formed, which by degrees corrodes the bone, and makes its way towards the skin. When it is come so far, that fluctuation can be observed, he advises, that the matter should be immediately discharged by incision. If, at the same time, proper medicines be given, the children well supported, and the parts kept clean and dry, patience and perseverance will frequently effectuate cures, not otherwise to be brought about.

The rickets, of which Mr Bromfeild treats, in his second chapter, depend, he tells us, on a general laxity of the system, together with a particular affection of the bones, which are then always found more or less in a soft state. In consequence of this, the bones are rendered sometimes so flexible, as to be affected by every external

ternal pressure, even the most slight; and sometimes merely by the action of different muscles. A very extraordinary case of such flexibility in the bones, which was communicated to the author by Mr Sue, surgeon to the Charitè at Paris, is here narrated. In the cure of the rickets, as the mesenteric glands are in general affected, after the intestines are thoroughly emptied, he recommends the use of purified quick-silver, which he assures his readers is a most efficacious remedy in removing such obstructions. Afterwards, in order to strengthen the patient, he directs the use of the cold bath and Peruvian bark.

The author next treats of contusions of the synovial glands. With regard to glands in general, he asserts, that there is no difference between the conglobate and conglomerate glands: For, says he, the same gland will be found in one animal of the conglobate, and in another of the conglomerate kind. And even in the human species, the same gland is in the foetus of the conglomerate kind, which afterwards becomes conglobate, as is the case with the kidney. Contusions of the synovial glands of the joints are very frequent. They are particularly apt to happen to those lodged in the acetabulum of the ossa innominata,

from falls upon the knee or the great trochanter. Accidents of this kind are chiefly to be detected by great pain of the joint, in consequence of falls, where neither fracture nor dislocation can be perceived. In such cases, Mr Bromfeild recommends repeated bleeding, together with low diet and gentle purgatives. But what he has found more effectual than every other method, is, keeping the rectum constantly empty by clysters. This, by removing every kind of pressure from the vessels within the pelvis, from which the glands of the joints are supplied, gives the greatest assistance in removing the inflammation.

The treatment of fractures is the next subject of consideration. If a surgeon be called immediately after a fracture, he may instantly proceed to the reduction; but, if the swelling be considerable, the limb, Mr Bromfeild tells us, should be allowed to rest till it be entirely gone. The fracture being reduced, and slips of paste-board, soaked in aqua saturnina, being applied, and retained by a roller not very tight, he advises that the limb should be laid in a bent posture, to relax the different muscles as much as possible.

In fractures of the patella, it has been a matter of dispute among practitioners, whether the separated

rated pieces of bone should be brought into contact and permitted to unite, or should merely be made to approach each other, but not so close as to endanger their union? The author imagines that the directions given by both parties are equally faulty. He advises, that no bandage should be applied for the first eight or ten days, or till the swelling and tension of the parts be entirely subsided: But after that, the ends of the bones may with the greatest safety be brought into contact and permitted to unite. To this method, it has been objected by some practitioners, that an ancylosis of the knee will be induced, by part of the ossific matter, intended for the callus, dropping into the joint, which they alledge would not happen, if the ends of the bone were not brought into contact. But this, the author tells us, occurs only when the leg has been kept extended and void of motion for too long a time; two months or ten weeks being the common period. If, however, by the end of the third week, the patient be permitted to hang his leg down, beginning with the slightest deviation from the extended state, and every day continuing to bend it more and more, the callus will gradually be extended, the interior surface of the patella rendered

red perfectly smooth and equal, and a proper motion of the joint with its usual strength will be obtained.

A fracture of the fibula is considered by many surgeons as a thing of little consequence ; but our author asserts, that the greatest attention is here requisite ; and that lameness as often occurs from mismanagement in this case, as from a fracture of any bone whatever. In applying the proper bandages, he advises that particular care be taken that it be done in such a manner, as to prevent the fractured ends of the bone from pressing upon the tibia. The same caution is likewise necessary in the treatment of fractures of the radius and ulna. In these cases, broad long splints only should be applied. They should be long enough to support the hand, and hinder its pronation and supination ; and broad enough to prevent the tapes from pressing on the bone, in the space between the edges of the paste-board.

In fractures of the ribs, an emphysematous swelling is no uncommon symptom. This is sometimes so considerable as to extend over the whole body, while, at the same time, a difficulty of breathing frequently takes place to such a height

as

as to endanger suffocation. These symptoms evidently arise from the lungs being wounded, together with the pleura, by the extremities of the fractured rib. By this means, the air finds a passage into the cavity of the thorax, and into the surrounding cellular membrane. The cure consists in giving a free exit to the air. For this purpose, Mr Bromfeild advises the paracentesis of the thorax, which was first proposed by Dr Monro, and afterwards by Mr Hewson, although our author seems to imagine that it had before been hinted at by Paré.

In the treatment of fractures of the extremities, whether of the simple or compound kind, the placing of the limb in that position, in which the muscles will be most relaxed, is greatly recommended. And Mr Bromfeild informs us, that it is now near thirty years since he inculcated that method in his public lectures. He recommends, in very strong terms, the use of the splints invented by Mr William Sharp, as, by means of them, the limb can be kept perfectly easy, and at the same time so firm, that the patient can be removed from one place to another, without danger. When these cannot be had, he recommends strong paste-board, soaked in water or vinegar, as

it very readily takes the shape of the limb, and when dry keeps it perfectly firm.

In treating of the stone, Mr Bromfeild sets out with a description of the parts subservient to the secretion, reception, and expulsion of urine, and of the parts which are cut in the operation of lithotomy. He imagines that calculous complaints arise from the blood being overloaded with those earthy and cretaceous particles, which, even in a natural state, it always contains in a certain proportion. He accounts for its occurring more frequently in the kidneys and bladder than any other part, from the great quantity of that sort of matter which daily passes off by these organs, and from the ready nucleus for stone, which is afforded by a small quantity of gravel resting in the bladder. From this supposition too, the author accounts for women being so seldom afflicted either with the stone or the gout; as, he alledges, that, in them, when the bones are arrived at their full growth, the redundant cretaceous particles are carried off by the uterine discharge. In confirmation of this opinion, he mentions two cases in which a cretaceous concretion, about the size of a child's head, was found in the cavity of the uterus in two different women. This chalky matter, he concludes,

cludes, must certainly have been brought there by the blood vessels which open into the cavity of the womb.

Mr Bromfeild puts no faith in the power of solvents of the stone, whether taken by the mouth or injected into the bladder. He is even of opinion, that in both ways they will frequently do mischief; as, by occasioning delays, diseases of the bladder may occur from which the patient's chance of recovery will be diminished.

When treating of the operation of lithotomy, he mentions several methods which have been proposed by others, and concludes with the account of one peculiar to himself, which he has practised for several years past, and still continues to prefer. In the common lateral operation, which is at present most frequently performed, Mr Bromfeild alledges, that the gorget, the cutting instrument which is made use of, seldom, if ever, cuts the prostate gland properly; and as its shoulders are generally high, there is a risque, by pushing it forcibly forward, of separating or tearing the prostate gland from the membranous part of the urethra. To avoid all danger of this kind, he advises that as much of the prostate gland as we would wish to divide should be cut with the scalpell;

pell; and this, he assures us, can be done with the greatest safety. He tells us, however, that there is no necessity for dividing the whole gland. About two thirds of it next to the membranous part of the urethra being cut through, the remaining found part will in general yield sufficiently for the extraction of most part of stones; and, by this means, the patient will always be enabled to retain his urine: So that there will be little risque of fistulous ulcers remaining after the operation.

For such as are afraid of cutting so deep, as is here directed, with the common scalpell, he recommends, either the bistourie caché of the French surgeons, or the double gorgeret, an instrument of his own invention. He likewise proposes some improvements upon the forceps. When stones are large and soft, he proposes a contrivance for preventing a great degree of pressure on them, by means of an iron pin passing through a female screw in one branch of the forceps, and reaching very nearly in contact with the other, while the stone is included in the forceps. When the stone is rough, in order to prevent its lacerating the parts, two additional blades are proposed, which, he tells us, may easily be introduced, one by one, and afterwards fixed at the axis. In this way, the stone comes

comes to be in a manner incased, and may be extracted with safety.

Mr Bromfeild is of opinion, that the success of lithotomy depends much upon the management of the patient before and after the operation. Among other things he recommends the warm bath as a proper preparatory step; and he enjoins it as absolutely necessary after the operation, if the pain in the wound should be great, the abdomen tense and hard, the skin dry, the fever smart, and no discharge by urine.

In the fistulous openings that sometimes remain after this operation, when they are of a small size, and when bougies have failed in the cure, the author tells us, that he has often succeeded, by introducing a knitting needle, pretty hot, which, by making the sides of the canal swell, brings them into contact, and thus disposes them to unite.

In extracting the stone from women, two methods have been proposed; either by dilatation, or by division of the urethra. When the former of these ways is resolved upon, a new method of doing it is recommended by our author, which, from his own experience, he has found successful. The closed extremity of the appendicula intestini caeci of any small animal, being introduced into
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the bladder, by means of a blunt directory, and a proper length of the open end being left out, it is to be filled with warm water, by means of a syringe, and the water prevented from returning, by a proper ligature. A twist or two is then to be made, upon that portion of the appendicula which was left out, so that the closed end may be distended; and thus, a twist or two being given from time to time, a considerable dilatation may, he tells us, be produced, without excoriation, or much pain; both which circumstances, in the common method, cannot be avoided.

When the method by incision is preferred, it may, he tells us, be done, by introducing a straight directory, by the urethra, into the bladder, and passing the double gorgeret along it, in such a manner as to cut the neck of the bladder on the left side, slanting obliquely downwards. The operation is afterwards to be finished in the same manner as in men.

This treatise is concluded by some observations on different diseases of the urethra. In total suppressions of urine, from whatever cause, Mr Bromfeild tells us, that we may frequently succeed in the introduction of the catheter, by first attempting

attempting the introduction of a bougie, which may often be done, when the other cannot.

Tumours frequently arise in the perineum, in consequence of a gonorrhoea being suddenly suppressed; and when they are allowed to suppurate, and break outwardly, very troublesome fistulous openings are often the consequence. This, the author tells us, may, in almost every case, be prevented, by the introduction of bougies before the breaking of the abscess, which will bring on a suppuration internally. Swellings of the testicles, in consequence of the suppression of gonorrhoea, may likewise, he tells us, be frequently removed, merely by the use of bougies, from their inducing a return of the discharge. When bougies are used, he inculcates strongly, that care be taken to secure them properly; because, from want of attention to this circumstance, disagreeable consequences have sometimes occurred.

III.

Memoire sur les Abces critiques ; par J. G. Acrel.
Vid. Memoires de l'Académie Royale des Sciences
de Stockholm, traduit par M. De Keralio, 4to,
Paris.

THE author of this memoir furnishes us with an instance, in which very fatal consequences ensued from opening abscesses formed externally. When the French army returned from Bohemia, a putrid fever prevailed in it, which seemed to be occasioned by excessive cold and great fatigue, superadded to the vernal tertians. Upon reaching the frontier hospitals, the sick enjoyed a more favourable situation. Abscesses were then formed behind the ears, in the arm-pits, and other parts of the body, and, by the appearance of these, the febrile symptoms were evidently abated.

The first method practised with these abscesses was, to open them upon being fully matured. But, when this was done, the patients felt themselves much weakened ; their symptoms returned ; and they in general died within eight days. In
some

some cases, after the fluctuation of matter could be distinctly felt in these tumours, it was discharged by stool, by spitting, or by the nose; and, in these cases, the patients in general recovered.

The physicians, therefore, were naturally led to follow the cure pointed out by nature. They no longer opened these abscesses. They neither attempted to promote suppuration by external applications, nor to retard it by means of evacuants. But, when the abscesses were fully matured, they purged their patients with manna, rhubarb, cassia, or Epsom salt. It was observed, that, by the time they had taken the third dose, the stools, in general, became purulent, the patients felt themselves easier, the abscesses diminished, and at length entirely disappeared. For diet, they had good soup, without salt or spice; and their drink consisted of mucilaginous ptisanes. By this treatment almost all who were affected with the disease recovered.

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Memoire sur l'Usage du Stramonium, par J. L. Odhélius. Vid. Memoires de l'Académie Royale des Sciences de Stockholm, traduit par M. De KERALIO. 4to Paris.

Fourteen epileptic patients in the royal hospital at Stockholm were treated with pills of the stramonium. Of these, eight were intirely cured, five had their symptoms mitigated, and one only received no relief. The greatest part of these patients, upon beginning the use of this remedy, were affected with confusion in their heads, dimness in their eyes, and thirst; but these symptoms gradually diminished.

A woman, after child-bed, was seized with madness, for which no cause could be assigned. Her menses continued regular, but she shewed evident marks of great sensibility of the nervous system. Two physicians who attended her, after trying other remedies in vain, had recourse to the stramonium. They began her with pills of half a grain thrice a-day, and gradually augmented the dose,
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till she took six or eight grains in the day. The good effects of this remedy soon appeared. It was not long before she recovered her reason, which she enjoyed perfectly for many years afterwards.

A woman, after being for nine years affected with an itchy eruption at the points of her fingers, had it cured by means of plasters. This cure was followed by fluor albus, attended with many troublesome symptoms, the principal of which were, oppression at her breast, a tendency to delirium, vomiting, and frequent pains in her belly. The ordinary medicines employed in such cases were tried in vain ; and attempts were made to recall the eruption to her fingers, but to no purpose. But, by the use of stramonium pills, her symptoms were greatly abated, her appetite restored, and her general habit and strength much recruited.

Memoire sur maux guéris par l'Electricité, par
J. Lindhault. Vid. Memoires de l'Académie
Royale des Sciences de Stockholm, traduit par
M. De Keralio. 4to, Paris.

I. *Deafness.*

A man was affected with deafness in his left ear, accompanied with constant tinnitus. For this complaint, he was electrified, and in two or three minutes his hearing was perfectly restored.

A man, for thirty years, had his hearing considerably impaired; and, for ten years, he had been affected with tinnitus and pain in the teeth. By the use of electricity, he was freed from all these complaints.

A young man, about twenty years of age, was afflicted with very violent colics, during which, there was a discharge of blood from his ears. This impaired his hearing; but by electricity it was restored.

A girl seven years of age, who had been deaf, and of consequence dumb, from the time of her birth, was electrified. Her hearing was gradually restored ; and she soon learned to speak.

A young man, about nineteen years of age, falling into water through ice, contracted a dullness of hearing ; from which he was soon recovered by electricity.

II. *Pains in the Limbs.*

A stone-hewer, after being long subject to attacks of epilepsy, was at length affected with pain and stiffness in his feet and knees. By the use of electricity, for a few days, he became able to work as before.

A young man was so afflicted with pain in his right thigh, as to be unable even to turn himself in bed. Upon its being electrified for a few days, he was able to walk out of his chamber, without any uneasiness.

III. *Muscular Contractions.*

A man, whose knee-joint had continued bent for several years, upon being three times electrified, was restored to the free use of it.

A young man had his right foot bent outwards in such a manner, that he could not walk without a staff. He was electrified for thirteen days. On the thirteenth, he burnt his staff, and never had occasion to use it afterwards.

A girl, about four years of age, contracted a slight lameness from the small pox. This complaint encreased in such a manner, that, by the time she was thirteen, she could not walk without crutches, and barely touched the ground with her toes. After being electrified for twenty days, she could walk without any assistance.

IV. *Intermittent Fever.*

A gardener, aged thirty-three, wanted to try electricity for an obstinate quartan, under which he had laboured for a long time. He was accordingly electrified, after which, he sweated profusely for several nights. Upon this, his paroxysms became less severe, and at length the fever entirely left him.

We have had, says Mr Lindhault, several examples of the efficacy of electricity in each of these cases. And it has also been employed in palsy

palsy of the tongue, weakness of sight, epilepsy, rheumatism, colic, and toothach with equal success.

VI.

Memoire sur l'Usage Medicinal du Genêt, par J. Odhelius, medecin du Roi. Vid. Memoires de l'Académie Royale des Sciences de Stockholm, traduit par M. De Keralio. 4to, Paris.

THE Swedish army having gone into winter quarters in the year 1759, there appeared among them a catarrhal epidemic fever, which usually terminated by an imperfect crisis. The feet, legs, and thighs swelled, and these complaints either continued obstinate or terminated in a formal dropsy. Attempts were made to stop this metastasis by the use of purgatives. They frequently occasioned a watery diarrhoea, but without relieving the symptoms. Diuretics were more successful, particularly a lixivium of the ashes of juniper. But this plant being very rare, broom was substituted in its place, which had a

still better effect. From drinking a strong lixivium off broom-asbes, the urine became abundant, and the swellings soon disappeared. By employing, after this, the common means for strengthening the solids, many were restored to perfect health.

VII.

Recherches sur les modifications de l'atmosphère, contenant l'histoire critique du Barometre, et du Thermometre, un traité sur la construction de ces instrumens, des experiences relatives à leurs usages, et principalement à la mesure des hauteurs, et à la correction des refractions moyennes, avec figures, par J. A. De Luc, Citoyen de Geneve, Corresp. des Académ. Royale des Sciences de Paris, et de Montpellier, tome 1. 4to, Geneva.

FOR the work now before us, we are indebted to the long continued labour of a most industrious philosopher. In the year 1762, Mr De Luc presented his manuscript to the royal academy of sciences at Paris. It was submitted to the

the examination of those eminent men, Messrs De la Condamine, and De la Lande, who, after attentive perusal, gave it as their opinion, that it might justly be considered as one of the greatest treasures with which philosophy had been enriched for many years before. But the author, that he might have an opportunity of still farther confirming, by repeated experiments, those discoveries which he had made, kept the work ten years longer in his possession, before he would venture to submit it to the judgement of the public. How far it will now satisfy the high expectation that has been entertained with regard to it, those who attentively examine the work itself must determine. All that we can propose is, to give our readers such a view of it, as the limits of our publication will allow.

The importance of the barometer, in the solution of many questions in natural philosophy, and the difficulties that attend its construction and application for obtaining these ends, first induced Mr de Luc to turn his attention to the improvement of this instrument. He hoped, that thus he should be enabled to give a more exact solution of many of those phaenomena which, by means of it, may be elucidated. In the progress of his

inquiries, finding how intimately the barometer is connected with the thermometer, he has likewise bestowed part of his attention upon this last instrument. To shew the state in which he found the barometer, and to rouse the attention of the public to a subject so interesting, he sets out with a history of that instrument. In this he presents us with an account of its invention, of the most essential changes which have been made upon its construction, of the theories which have been formed to explain its phaenomena, and of the principal experiments hitherto made with it.

Few are ignorant, that the barometer was invented in the year 1643, by the celebrated Torricelli, and that he likewise pointed out its use for discovering the weight of the atmosphere. Soon afterwards, Mr Pascal hinted at its application for measuring the heights of mountains, which was first put in practice by Mr Perrier.

In treating of the changes which this instrument has undergone, Mr de Luc first gives an account of the Torricellian barometer, and then of those invented by Descartes, Huygens, Hook, Morland, Bernoulli, Amontons, De Mairan, and Prins. To the account of each he has added
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some observations on the advantages and disadvantages with which it is attended.

A phaenomenon attending barometers, which soon attracted the attention of philosophers, was the light which they often produced, upon the mercury within them being agitated. Upon this subject he presents us with the opinions of Bernoulli, Homberg, De Mairan, Du Fay, and Musschenbroeck, who imagined, that it chiefly depended upon some particles of fire, introduced, either by the mercury having undergone a preparation, by which some such matter might attach itself, or by some particles of air getting into the upper part of the tube, and carrying along with them the matter of fire. These opinions, however, for many reasons, he rejects, and inclines to adopt that of Mr Hawkesbee, who supposes it to be an electrical phaenomenon. This he endeavours to support, by shewing, that those circumstances which influence the electrical power in glass globes, have the same effect upon this property of barometers. Musschenbroeck had found, that the barometer, in this state, attracted a thread, but supposed it to depend upon the agitation of the air. This objection, however, has been obviated by Mr Ludolff, in the Berlin Memoirs, who included
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both the thread and barometer in an exhausted receiver, and then found the thread attracted in the same manner as in the open air. He concludes his remarks on this subject with observing, that a well constructed barometer is in general electrical, but that a barometer may be electrical, and, at the same time, contain such a quantity of air, as to render it highly defective, and that a barometer may be very good without being electrical.

He next proceeds to mention the method of exhausting barometers of their air, by means of boiling the mercury in them. This method, he tells us, was first communicated to Du Fay, by a German artist, and afterwards put in practice by M. Cassini de Thury. He represents it as very advantageous for correcting the irregularity of different barometers, when placed in the same circumstances; but imagines it has been little followed, from the imperfect directions given concerning it; from the difficulty of the practice; and from its appearing to be but of little consequence.

He next takes notice of an experiment of M. Plantade, concerning the effects of the different diameters of the tubes employed as barometers. At a thousand toises above the level of the sea, that gentleman found that the mercury was lower
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in small tubes than in large ones; but that, above that height, they were all equal. This he attributed to the different weights of the air. But Messrs Cassini and Monnier, upon repeating the experiments, found, that the difference depended upon portions of air remaining in the tubes.

This chapter is concluded with an account of the effects of heat upon the barometer, which was first observed by Mr Amontons, who gave a rule for correcting it; but Mr de la Hire has contradicted it from his experiments. And both Du Fay and Beigton contend, that it happens only in those barometers which are not perfectly purged of air. But our author thinks they are mistaken, the foundation of which he afterwards points out, when giving an account of his own experiments. He concludes, therefore, that heat has some influence upon the barometer.

Having thus given an account of the invention of the barometer; and of the varieties in the construction of it, the author proceeds, in the third chapter, to treat of the variations which the mercury undergoes in point of height. This, he observes, is one of the most interesting phaenomena with regard to the barometer, and has engaged the attention of the most eminent philosophers.

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They all agree, that differences in the height of the column of air, and changes in the state of the air itself, have considerable influence upon it. But, as it is evident that other effects, which must necessarily proceed from these causes, and the variations which take place in the barometer, by no means correspond to each other, causes of a different nature must necessarily be called in : And on this philosophers have differed much in their opinions. Mr de Luc here presents us with an account of the hypotheses of Pascal, Beal, Garden, Wallis, Lister, Halley, Garsten, De la Hire, Mariotte, Le Cat, Woodward, Leibnitz, Mairan, Hamberger, Bernoulli, and Musschenbroeck. With regard to these opinions in general, the author remarks, that, although many of them be founded upon circumstances which undoubtedly hold to a certain degree ; yet they are by no means sufficient to account for the varieties which occur ; and that therefore some other cause must be sought for.

In the fourth chapter, the author presents us with a particular history of the attempts which have at different times been made to ascertain heights by means of the barometer. The first who attempted this was Pascal. The author sets out, therefore, with an account of his experiments
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on this subject; after which, he subjoins those of Boyle, Mariotte, Halley, Maraldi, Scheuchzer, J. Caffini, Bernoulli, Le Monnier, Caffini de Thuri, Horrebow, and Bouguer. The differences among them are very remarkable. To illustrate this, a table is subjoined, in which we have a distinct view of the heights, supposed by each, to correspond to determined falls in the barometer. This uncertainty, the author tells us, first excited his curiosity. And, as he found authors disagreeing so much, he resolved, shutting every book upon the subject, to consult Nature alone, following her step by step, as far as she would conduct him. Having finished this history, therefore, he next proceeds, in the second part, to give an account of his own experiments and observations.

If the remarks offered in the preceeding history be well founded, it is by no means surprising, that barometers, even in the same circumstances, should disagree in point of altitude. Our author's first attention, therefore, is naturally bestowed on the means to be employed for constructing barometers, in such a manner, as to correspond with each other, and be uniform in their rising and falling. The principal varieties in barometers, according to our author, depend upon the method

thod of filling the tube, the influence of heat, the level at which it is placed, the form of the tube itself, and the position and division of the scale. On each of these subjects we are presented with many experiments to shew their influence ; and with directions by which the faults resulting from thence may be corrected.

When a barometer is to be filled, for properly purging it of the air, he recommends that the mercury should be boiled in the tube. This is to be done by turning downwards that extremity of the tube, to which the scale is to be fixed, and then holding it obliquely over a charcoal-fire, exposing the different parts of the tube successively, till the boiling takes place.

Heat affects barometers in two ways, either by acting upon the mercury itself, or upon the air they contain, if they be not properly purged of it. In the one case, it produces a regular elevation of the mercury, and in the other an irregular depression. For the variations occurring in the latter of these ways, no standard can be fixed. But, in the former case, proper allowance may be made, from determining, by a thermometer, the degree of heat in which the barometer stands.

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Great care is necessary in determining the level of a barometer ; and, when a comparison is to be made, the tubes should be as nearly as possible of the same diameter.

Faults in barometers often arise from the manner in which the scale is measured, as well as from the divisions themselves : Particular attention to both circumstances, therefore, becomes absolutely necessary. Another circumstance claiming attention, is the position of the barometer when an observation is made. With those that are fixed on a wall, attention is necessary only, that they be properly placed at first : But, with portable ones, Mr de Luc recommends suspending a plumb to them, that we may be better able to judge when they are perpendicular. Another thing necessary in making observations with barometers, is, that the eye of the observer be always upon a level with the mercury. By proper attention to all these circumstances, the author is of opinion, that observations made in different places may be compared with each other, and the barometer successfully employed for the solution of many useful problems in philosophy.

After these observations on barometers, the author proceeds, in the second chapter of this part,
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to treat of thermometers. He regrets much the many errors that have arisen, and the many observations that are rendered useless, by thermometers being differently constructed; And he observes, that this instrument can only be extensively useful, when some one scale is generally admitted, and all the others are abandoned. He next proceeds to treat of the matter of which they should be formed; and is of opinion, that quicksilver is preferable to every other, because the dilatations which it suffers from heat are most exactly proportioned to the variations of the heat.

The author next proceeds to give some account of the fixed points in thermometers. As these are not the same in different thermometers, this leads him to give a history of the principal thermometers which have hitherto been employed. From this it appears, that the temperature at which water freezes, and that at which it boils, are the two fixed points most generally adopted. On each of these, therefore, he bestows particular consideration.

After pointing out the necessity of fixing with precision the inferior point, he observes, that the methods hitherto taken for ascertaining the degree of cold sufficient to freeze water are equivocal.

vocal. To prove this, he examines particularly the opinion of Mr Reaumur, who seems to have bestowed the greatest attention on this subject. He proposes that, for fixing the inferior point of all thermometers, we should employ the temperature of melting ice or snow; and he adduces several experiments to prove, that this point can be ascertained with greater precision than any other.

The superior fixed point, which has in general been adopted, is that of boiling water. This he thinks preferable to that of Mr Reaumeur, who took, as his fixed point, the highest degree of heat, of which spirit of wine is susceptible, without boiling. But the heat of boiling water, he observes, is influenced by several circumstances. The first which he mentions, is the pressure of the atmosphere upon the surface of the water, which, at different times, varies considerably. To remedy this, he proposes, that all thermometers should be made when the barometer is at a determined height. For ascertaining both the inferior and superior fixed points, he directs, that rain-water should be employed, as being most free from impurities.

The division of the scale of a thermometer, he observes, is of itself a circumstance of little consequence : But it is of importance, that scales, which have already been much employed, should be retained. Hence he is for continuing the use of those of Fahrenheit and Reaumeur ; in the first case, dividing the interval between the two fixed points into a hundred and eighty ; and, in the latter, into eighty equal parts.

In treating of the construction of thermometers, he tells us, that capillary tubes are preferable to others ; but that great care should be taken that the calibers be uniform ; that the balls bear a proper proportion to the length of the tube ; and that very pure mercury be employed for filling them. He is of opinion, that the best scales, both for thermometers and barometers, are those made of fir.

Hitherto the author has treated of thermometers adapted to the purposes of philosophers : But, in the third chapter of this part, which concludes the volume now before us, he offers some observations on those intended for the use of the public in general. These, he thinks, should be made of spirit of wine, rather than of mercury, as, in this way, they can be more easily executed, and will
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be less expensive. After offering many directions, which he thinks should be followed in regulating and constructing these, he observes, that the concurrence of the public is the only measure which will ever induce artists to relinquish those faulty methods which they have already adopted*.

VIII.

A Treatise on the Kinkcough, with an Appendix, containing an account of Hemlock, and its Preparations. By William Butter, M. D. Fellow of the Royal College of Physicians Edinburgh. 8vo, London.

THE observations on kinkcough, with which we are here presented, are divided into seven chapters. In the first of these, the author sets out with enumerating the synonimes for this disease which have been employed by different authors. He then defines it, A quick and numerous succession of violent short coughs, followed by a long, strait, and generally shrill inspiration, which coughs and inspiration are repeated

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* An account of the second volume of this work will be given in a future number.

without intermission, for many seconds, or even some minutes, and often terminate in vomiting of phlegm. To this definition he subjoins a full description of the disease; and concludes the chapter with some remarks upon the prognostics. According to Dr Butter, a fatal termination of kinkcough is owing, either to the length of the disease, or the violence of the fits. In infants, he observes, it terminates fatally, from producing convulsions, suffocation, apoplexy, inflammation and suppuration of the brain, ruptures, and incurvation of the spine. In pregnant women, it has often produced abortion; and, in adults, it occasions inflammation of the lungs, and its consequences, more frequently than in children. From long continued kinkcough, patients will become asthmatic, consumptive, rickety, or scrophulous.

The author considers a moist skin, warm limbs, open belly, plentiful expectoration, and free vomiting, as good symptoms. On the contrary, he draws an unfavourable prognosis, when opposite circumstances take place. Frequent hæmorrhagies, he observes, protract the disease, and a pulmonary one is apt to induce consumption. In patients liable to epilepsy, or other disorders of the brain; in such as have weak lungs, or who
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have been reduced by a preceeding disease; the kinkcough is often productive of the worst consequences. When joined with worms, dysentery, measles, small-pox, or peripneumonic symptoms, it is always dangerous. Our author concludes this chapter with observing, that these prognostics, according to the common method of cure, are uniformly just; but that a more successful treatment will afford exceptions as to the danger.

In the second chapter, Dr Butter proceeds to consider the nature of kinkcough. It is, our author observes, an epidemic contagious disease, often complicated with other disorders, forming varieties worthy of the most attentive consideration. It is not essentially attended with fever; as in the intervals the patient is entirely free from any complaint. It commonly lasts for some months, returning in fits for the most part at equal distances. Much bleeding and purging are hurtful in it. The most famed remedies for it, are gentle vomits, stomachic laxative paregorics, and stimulating antispasmodics. It has often been carried off by a fright. And the dissections of those dying early in it have discovered nothing praeter-natural. From all these circumstances, he concludes, that it is a nervous spasmodic disease.

He farther remarks, that an uncommon secretion of mucus takes place in this disease, a free discharge of which mitigates the symptoms : And that, in proportion as the quantity of slime diminishes, the fits become more mild and less frequent. From this, he concludes, that a morbid irritability of the mucous glands is the primary affection, and that the spasms are only secondary.

An inquiry concerning the seat of the kink-cough is the subject of the third chapter. Various have been the opinions entertained with regard to it. Some have supposed it to be in the lungs, some in the stomach, some in both, while others have maintained that it is in the head of the wind-pipe or gullet. Dr Butter deserts all these opinions, and denies that any one of the places above mentioned is primarily affected. He alledges, that some part of the intestinal canal is the principal seat of this disease. To confirm this opinion, he offers arguments drawn from four sources : 1. From the nature of those habits most subject to kinkcough. It chiefly attacks children ; and, in them, it is well known that the intestinal canal is more irritable, and consequently more easily affected, than any other part of their bodies.

bodies. 2. From the nature and cure of kinkcough, it is observable, that those children pass most easily through this disease, who have an open belly; that vomits are most serviceable when they promote a gentle looseness at the same time; and that patients labouring under kinkcough bear the action of vomits much better than they do of purgatives. All these circumstances, in the opinion of our author, seem to point out the intestines as the seat of the disorder. 3. From the diseases consequent upon kinkcough. The chief of these are, the king's evil and rickets; both of which, in a particular manner, derive their origin from an affection of the alimentary canal. 4. From the periodical returns of the paroxysms. Here our author runs a parallel between kinkcough and intermittent fever. He thinks it the most probable opinion, that the latter of these diseases has its proximate cause in the guts; and he is even inclined to suppose, that all intermittent distempers depend upon a primary affection of the intestinal canal. In support of this doctrine, he adds the history of three intermittent diseases, which were principally cured by evacuations from the intestines.

The author concludes this chapter with adducing some objections against the supposition that kinkcough is seated either in the stomach or lungs. He thinks it improbable that it is seated in the lungs, as he alledges that, in this disease, pectorals do more harm than good: That a pulmonary cough, if not dangerous, terminates sooner than kinkcough; and that the rickets and scrophula are never produced by a pulmonary cough. He thinks it improbable that it is seated in the stomach; because it is not attended with violent pain, sickness, faintishness, and such like symptoms; and because intermittent disorders in general can never be suspected to have their seat in the stomach, since vomits render more distinct intermissions which were formerly obscure.

Having endeavoured to ascertain the seat of kinkcough, Dr Butter next endeavours to investigate its causes. As the chief predisposing causes, he points out the constitutional irritability of children; hereditary predisposition to spasmodic disorders; the actual existence of such disorders; a redundancy of vitiated humours in the stomach and guts; worms; dentition; cold; and acute diseases in general. The occasional cause he supposes to consist entirely in infectious miasmata, capable

capable of generating the disease. These miasmata, he thinks, are the growth of Europe, in the same manner as those of the plague, measles, and small-pox, are of warmer climates.

Dr Butter next presents us with the history of twenty cases of kinkcough, in which he employed hemlock, in different forms, with great success. Building upon this practice, he proceeds, in the sixth chapter, to lay down the cure of kinkcough, both simple and complicated. In the simple kinkcough, he tells us, there is but one indication, and that is, to administer hemlock. He directs that it should be diffused in a watery vehicle, begun in small doses, and gradually increased. For a child under six months old, he directs half a grain to be consumed in a day; for one from six months to two years old, one grain; afterwards allowing half a grain for every year of the patient's age, till he be twenty: Beyond that period, he directs that ten grains be given for the first day's consumption, gradually increasing the dose according to its effect. If the patient have not two stools a-day, he advises that magnesia or polychrest salt be added to the hemlock-mixture. In the cure of kinkcough complicated with worms, dysentery, dentition, ague, small-pox, and measles,

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he recommends, with the employment of hemlock, the exhibition of such medicines as are best adapted to the nature of each particular disease. When kinkcough is complicated with pregnancy, the simple method of cure may, he tells us, be followed out with success.

This treatise on kinkcough is concluded with some general corollaries drawn from the preceding observations. He alledges, that hemlock is seldom contra-indicated by any peculiarity of temperament; that it is a safe remedy for kinkcough, both in the last months of pregnancy, and first months of infancy; that it is a certain antispasmodic; that it is a good medicine in dentition and worms; that it sometimes removes fever, stops immoderate excretions, and promotes sweat; that it frequently keeps the belly open, and often purges; that sometimes it affects no secretion or excretion; that it immediately procures better nights in kinkcough, abates vomiting, and diminishes phlegm; and that, in the space of a week, it generally removes the kink and other concomitant symptoms, except a slight cough.

To these observations on kinkcough, the author subjoins an appendix concerning hemlock and its preparations. He here first presents us with the
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synonimes and botanical description of the plant ; and then makes some remarks on its preparations, which he divides into internal and external. Of the first kind are, the powder, the extract, the pills, and the mixture ; and, of the last, the plaster, the ointment, the poultice, and the fomentation.

The powder of Hemlock, Dr Butter prepares from the leaves, foot-stalks, and tender parts of the stem, gathered about the time the flowers begin to open. These he directs to be spread on a hearth, before a good fire, with a deep fender behind, to hasten the process of drying. When they are sufficiently friable, they must be reduced to a powder, and preserved in phials well stopped. The powder, in this situation, will retain its efficacy for several months.

In order to prepare the extract, the plant, he tells us, at the same age at which it is cut for the powder, must be gathered over night, that all the other parts of the process may be finished on the following day. After being cut, bruised, and put into hair bags, the expression must be continued till the drops fall very slowly. The whole of the juice, without depuration, must then be put into a broad glazed platter, and placed over

a charcoal-fire, in a fire-pan. Before it becomes very hot, it runs into clots. You are then to stir it frequently with a hemlock stalk, keeping up a sufficient degree of heat to make the clots move about, without causing any ebullition. Proceed in this manner, till the intestine motion ceases, and no effort is made by the contiguous mass to fill up any vacuities which the stirring may occasion in the bottom of the platter. You will then, says he, have an extract of a proper consistence.

For making the pills, he advises, that to any quantity of the extract, one fifth of the powder should be added. The mass thus formed, is to be put up in stone pots, capable of containing a pound weight; and in this manner, we are told, it will keep perfectly well for the space of two years.

The hemlock mixture is an extemporaneous prescription, and is made by dissolving from eight to twenty, or more grains, of the mass prepared for pills, in eight ounces of spring water, and adding to it half an ounce of proof-spirit, and as much white sugar.

For the hemlock-plaster, he gives the following receipt. Take of gum ammoniac eight ounces,

ces, common vinegar an English pint; rub them together in a marble mortar, till the gum be dissolved; then incorporate the strained solution with four ounces of the mass of hemlock-pills; and afterwards evaporate the whole over a very gentle heat, to the consistence of a plaster.

Equal quantities of the mass of hemlock-pills and honey, mixed together without heat, constitute his ointment. And his poultice is made, by mixing either the powder of hemlock, or the bruised leaves, with oat-meal, and a small proportion of honey, adding as much spring-water as may be sufficient to bring the other ingredients to a proper consistence. The hemlock-fomentation he directs to be prepared, by boiling eight ounces of the fresh herb, well bruised, in an English gallon of water, straining the liquor when cold, and afterwards heating it for use.

IX.

Examen de la Question, Si les Espèces changent parmi les Plantes? Nouvelles Expériences tentées à ce sujet. Par M. Adanson. Vid. Histoire de l'Académie Royale des Sciences, année 1769, 4to. Paris.

THE question which is proposed as the subject of this dissertation, was first started by Mr Marchant. In the year 1715, he found a species of mercurialis, the leaves of which resembled threads. It differed so much from the common mercurialis, that he thought it deserved a particular name: He therefore denominated it *Mercurialis foliis capillaceis*. The year following, this plant appeared in the same place, with its leaves deeply cut, from which he termed it, *Mercurialis foliis in varias et inaequales lacinias quasi dilaceratis*. These observations led him to suppose, that new species of plants may be produced.

Nothing farther was said upon this question, till the year 1744, when Mr Linnaeus, who had formerly

formerly been of a different opinion, began to entertain doubts on this subject, and to allow the possibility of new species being produced. This proceeded from his having observed several transformations in plants. Of these we are presented with some instances in the paper now before us.

Mr Zoiberg, in the year 1742, when botanizing in an island about seven miles from Upsal, found in a gravelly soil, which was covered over with *Linaria*, a plant greatly resembling the common *Linaria*, but differing from it so considerably, as to constitute a new genus, which he named *Peloria*. He imagined that it proceeded from the *Linaria* being foecundated by some other plant.

Another transformation happens annually in the garden at Upsal, where the seeds of the common thistle produce the thistle of the Pyrenees.

A third transformation is, that the great and small Vervine of America have produced a new species of Vervine, resembling in its leaves the Vervine of Europe, and in every other part the great Vervine of America.

From these, and other similar instances, Mr
Linnaeus

Linnaeus concluded, that many different genera of plants are derived from the same mother, by different fathers; and pointed it out as a new field for botanists to attempt the multiplication of the species of plants, by different mixtures.

Mr Adanson tells us, in the memoir now before us, that he was at first inclined to adopt this opinion; but that, from a more particular examination of the instances adduced, he was at length led to reject it. The mercurialis of Mr Marchant disappeared in the year 1716; and was first seen again in the royal garden at Paris, in the year 1766. It was in full bloom on the eleventh of July. Mr Adanson discovered it to be a male plant. Its leaves, although they had suffered no damage, resembled those of the *reseda*, when eat by insects. Its antherae were three times less than ordinary, of a spherical figure, and quite devoid of feminal dust.

To determine whether this plant was capable of generation or not, he placed six shoots of the female mercurialis under it, and shook it three or four times a-day over them, that, if it had any feminal dust, they might be foecundated. To avoid ambiguity, he destroyed every other plant of mercurialis in the garden. The seeds of the female mercurialis, under this male, being arrived at maturity,

ty, by the 15th of July, he sowed part of them. None of them, however, sprung, although the plant of extraordinary *Mercurialis* grew to the height of twelve inches, and lasted till the frost killed it. In the spring of the year following, he sowed the remaining part of his seed. About one in ten grew. But the plants produced were no other than the common *Mercurialis*.

As the leaves of the extraordinary *Mercurialis* resembled those of the *Refeda*, Mr Adanson attempted, according to Mr Linnaeus's idea, to impregnate the female *Mercurialis* with the staminal dust of the *Refeda*, and of the male *Canabis*. But, from all the seeds produced by these mixtures, he could obtain only the common *mercurialis*.

From these experiments, the author concludes, that the fecundation of the seed of one genus of plants cannot be brought about by the farina of a different one; that the few seeds of his *mercurialis*, which germinated, even when he had taken care to destroy every male in the garden, had been fecundified by the farina of some male *mercurialis* brought from the neighbourhood by the wind; and that those plants of *Mercurialis*, which Mr Marchant and himself had observed,

were only monstrous individuals, and by no means a new species.

He farther observes, that the *Peloria*, which is mentioned by Linnaeus to have produced fertile seed, is no stronger argument of a new species: Because several species of the *Linaria* will produce, upon the same plant, the flowers of the *Peloria* mixed with the common flowers; and, in these cases, the natural flowers only produce fertile seed. He is of opinion, therefore, that these extraordinary plants can be considered only as vegetable mules, in which the parts of generation are always vitiated,

As the facts, however, respecting the *Mercurialis* and *Peloria*, are the only authentic ones upon which the opinion of Linnaeus is founded, he thinks himself authorised to reject it. He concludes, therefore, that the production of new species does not take place in the vegetable, any more than in the animal kingdom; and that the deviations from nature are never allowed to pass certain bounds. Beyond these, says he, every thing retains that order at first established by the wisdom of the Creator.

X.

Nouvelles recherches pour servir à déterminer la Nature de la Bile, par M. Cadet. Vid. Histoire de l'Académie Royale des Sciences, Année 1769. 4to, Paris.

IN a former memoir, of which an account has already been given in these Commentaries, Mr Cadet had delivered his sentiments concerning the bile, at considerable length. He was induced, however, to resume the consideration of this subject, in consequence of a thesis published at Strasburgh by Mr Roederer.

In that thesis, the author had asserted, that the bile contains an acid, and that it coagulates milk. Supposing these assertions to be well founded, it could not be esteemed a real soap, which Mr Cadet had before attempted to establish. In the paper now before us, he endeavours to offer such a confirmation of his former opinion, as may remove any doubt arising from Mr Roederer's experiments.

Mr Cadet mixed bile with milk in a variety of ways ; and, from the result of six experiments, it appeared that the milk suffered no decomposition or coagulation. He still concludes, therefore, as he had formerly done, that the bile is an alkaline in the same manner as soap is. He accounts for the acid which Mr Roederer imagined he had discovered in it, from supposing that it may be the effect of an acid fermentation ; and this, he alleges, may be owing to the gelatinous part which it contains. At the same time, he observes, that, in his own experiments, he could never discover any acid fermentation in the bile, and that it always passed very quickly into a state of putrefaction.

The author, therefore, is inclined to believe that, in Mr Roederer's experiments, the coagulation of milk must either have been owing to the milk being already disposed to be sour, or to the bile being changed in its nature. He observes, however, that the effect of bile thus degenerated can be considered only as a solitary fact, and that no general conclusion can be drawn from it with regard to the constituent principles of the bile. He imagines, therefore, that his former conclusions were well founded ; and that the bile is an animal soap, void of all evolved acid.

XI.

Mémoire sur des Insectes sur lesquelles on trouve des Plantes, par M. Fougereux de Bondaroy. Vid. Histoire de l'Académie Royale des Sciences, Année 1769. 4to, Paris.

IT has often been observed, that some plants grow upon others, and derive their nourishment from them: But it is by no means so generally known, that vegetables can take root and flourish on living animals. Mr Fougereux has had an opportunity of observing some instances of this extraordinary fact. These observations, together with what other naturalists have said upon the subject, furnish matter for the memoir now before us.

The plants, of which an account is here given by Mr Fougereux, are perfectly the reverse of the worm-plant of China, described by Mr Reaumeur in the year 1726. For, in that case, a worm fixes its snout into the extremity of the plant, and derives nourishment from it. But the plants, of

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which an account is here given, derive their nourishment from the animals.

In this memoir, Mr Fougereux proposes to point out different insects upon which plants do grow; and to propose what seems to him the most probable method of accounting for this conjunction. The greatest part of the animal plants, which he has seen, grow, he tells us, on the chrysalis of a species of cicada. The plant growing on these insects has got the generic name of *Clavaria*, because its stalks and branches, when it has any, are terminated by tubercles, which give it the appearance of a little club. The root of this plant, in general, covers the body of the insect, and sometimes is even extended over its head. When these productions have for some time been preserved in spirits, the plant and animal may be separated from each other without hurting either. Small grooves, formed by the rings of the animal, may be observed running cross the roots of the plant: But no vestige can be found of the root's having any where penetrated the body of the insect. These plants produce fibres differing in length and number. The fibres are terminated by tubercles, which, before the plant arrives at maturity, are solid; but, after that period, they
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are found punctured, probably by worms which have suffered a metamorphosis upon escaping from them.

According to Mr Fougeroux, plants grow, not only on the chrysalis of the cicada, but upon the cicada itself. He saw one of this kind upon a cicada brought from Cayenne. The plant, in this case, differed from the clavaria already mentioned. It was a species of fucus, composed of long, white, silky fibres, covering the body of the insect, and extending, from seven to eight lines, above and below its belly.

The author has found the clavaria formerly described growing upon worms. He has found it chiefly upon those worms which, suffering a metamorphosis, become afterwards a small species of May-bug. This chrysalis, he observes, is very different from that of the cicada, and, even in its worm-state, may easily be distinguished from it.

After describing these different species of animal plants, the author next proceeds to offer his opinion upon this subject. He first considers what had been said by Dr Watson, in the philosophical transactions, concerning the vegetating fly of the Caribbee islands. Dr Watson's account of

these flies is, that they bury themselves about the month of May, and begin to be metamorphosed in June; and that the little plant which grows upon them resembles a branch of coral, is about three inches in height, and carries small protuberances, where worms are generated, which are again converted into flies. The author imagines, that, in this account, Dr Watson has been deceived by the worms which he has already mentioned eat into the clavaria, and undergo a change in the holes which they have there made. Mr Fougereux is rather inclined to adopt the opinion of Dr Hill, founded upon observations made at Martinico. There the cicadae are very frequent, and, during their chrysalid state, bury themselves among dead leaves, to wait their metamorphosis. Dr Hill imagines, that the seeds of the clavaria are then attached to them, and are afterwards developed, much in the same manner as the Fungus *ex pede equino* grows upon the hoofs of dead horses.

It may appear astonishing, that the clavaria should attach itself so constantly to the nymphae of the cicadae in America, as it is not observed to do so in other countries. For this Mr Fougereux attempts to account, from viewing the clavaria as a parasite peculiar to this species of insect; from
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the great number of the nymphae of cicadae which abound in America ; and from the circumstances of the climate and soil, which may render this phaenomenon very common there, although it be not observed in Europe.

Many particulars respecting this subject probably still remain to be investigated. Mr Fougereux, therefore, recommends it to those lovers of natural history, who have themselves an opportunity of examining facts of this kind, to multiply observations, by which a full account of this phaenomenon may be obtained.

XII.

Mémoire dans lequel on démontre l'action du Poumon sur l'Aorte, pendant le temps de la Respiration ; et ou l'on prouve, que dans l'Enfant qui vient de naître, le Poumon droit respire avant le gauche. Par M. Portal. Vid. Histoire de l'Académie Royale des Sciences, Année 1769. 4to, Paris.

IN this memoir the author sets out with observing, that no anatomist has hitherto given a perfect description of the trachea. To supply this defect,

defect, we are here presented with one by himself.

The trachea, he observes, when it reaches as far down as the second or third vertebra of the back, divides into two branches. These branches, which are termed bronchi, according to our author, differ from each other in thickness, length, and direction. The right, he tells us, is about one fourth part thicker, and one fifth shorter than the left, while the direction of these tubes undergoes changes at different ages. The left bronchial tube, in a foetus, is more inclined backwards than it is in an infant after respiration has once taken place; and the right, in an infant born to the full time, is more elevated than before birth.

After subjoining some other observations on the structure of these parts, the author farther observes, that the right bronchial tube has free motion in that cavity of the thorax into which it passes, while the left is closely contracted by the aorta. In consequence of this, the motions which take place in these two must mutually affect each other. To confirm his opinion, two instances are here subjoined.

Upon the dissection of a patient, who before death had complained of great difficulty of breathing,

ing, the passage of the left bronchial tube was much straitened by an aneurism at the curvature of the aorta. And, in a man who had a wonderful irregularity of pulse, the left lobe of the lungs being filled with tubercles, the bronchial tube of the same side was raised higher than usual, by which means it compressed the concave part of the curvature of the aorta. After narrating these instances, he next remarks, that, in respiration, the left bronchial tube is raised from its place, and carries the aorta along with it. In proof of this opinion, which, he thinks, may be of use in the practice of physic, he adduces some observations which he has himself made in opening living animals.

The dissection of a kitten which he killed a few minutes after being brought forth, gives him occasion for some farther remarks. In this animal, the right lung was of a whitish colour, filled the whole cavity of the chest, and swam in water. The left was of a dark red colour, in a collapsed state, and sunk in water. But, upon being blown into, it kept upon the surface of the water, in the same manner as the right. From this he concluded, that, in the first respirations, the air enters only into the right lobe of the lungs. In this opinion
he

he was confirmed, by repeated trials made upon other animals, and upon a human foetus which had never breathed. Upon blowing into the trachea, he found the right lung much more distended than the left.

He alledges, that this circumstance may easily be explained, from the remarks he had before made concerning the structure of the parts. And he concludes with pointing it out, as a particular well meriting the attention of those who are called in criminal cases, to determine whether a child has breathed or not. The right lobe may swim in water, while the left sinks. From trusting to a single trial, therefore, disagreeable mistakes may be produced.

S E C T.

S E C T. II.

Medical Observations.

1.

A Case of incarcerated Hernia Cured, by Mr William Chalmers, Surgeon in Edinburgh.

ABout eight or nine years ago, a strong healthy man, aged seventy-seven, by trade a baker, imagining he was to sit down upon a chair, which, by mistake, had been removed, accidentally fell to the ground. Immediately upon this, a small tumour was observed in his right groin. As it was concluded to be a hernia, he used a truss for it, and continued long free from any great uneasiness. If at any time it appeared, he could with great ease reduce it himself, till about five or six months ago. It then continued down for three days together, but

but without any violent symptom ; and at the end of that time it went up of itself. He remained in good health till the fourth of February 1773, when, upon an over exertion at work, the tumour appeared more large and tense than it had done ever before.

On the sixth of February, I first saw him ; and found the tumour larger than a man's fist, of an oval shape, and girded at the ring of the obliquus descendens muscle, as if a bit of tape had been tied round it, being much narrower there than at the lower part. The testicle could be distinctly felt. He complained of pain, when the tumour was touched ; he had passed nothing by stool for four days ; he vomited every thing he took ; he was affected with pain in his belly ; his thirst was excessive ; his skin hot ; his pulse beat ninety strokes in minute, and was full and strong. In this situation, he was blooded, fomented, and got several cathartics, both by the mouth, and in the way of injections. Many attempts were at the same time made to reduce the tumour, both by himself, and by me. But all was to no purpose.

Feb. 8. The symptoms above enumerated were much aggravated, with the addition of frequent hickuping. Two surgeons visited him a-
long

long with me, who agreed with me in opinion that the case was a strangulated hernia, and that the operation was absolutely necessary. It was accordingly performed that night. Upon opening the sac, I found that its contents were the caput coli, processus vermiformis, and part of the colon. These I had never before observed down, in any other case in which I had formerly operated. It likewise deserves to be remarked, that, although it was only four days since the descent of the gut, there were several strong adhesions to the back-part of the sac. They were, however, safely cut through, and the gut returned into the abdomen. Soon after the operation, there ensued a considerable haemorrhage; and, upon removing the dressings, the intestines were protruded as much as before. They were returned, the lips of the wound secured by a ligature, and a bit of sponge applied to the part from which the blood oozed most copiously.

Feb. 9. He had passed a pretty easy night. After the operation, he vomited a little, but none again till that forenoon. He had not yet, however, got any passage by stool; I therefore ordered a clyster, which operated twice. For the rest of
the

the day he continued pretty easy, and his pulse came down to eighty.

Feb. 10. He had a very bad night, vomited incessantly, complained much of pain in his belly, and had excessive thirst. He then got a calomel bolus, and a solution of Glauber's salt with manna; but he had no stool. He continued in the same way all that day; his pulse was feeble and intermitted frequently, and his look was pale and languid.

Feb. 11. He continued much as before, till about six in the morning, when he had several copious stools, and passed a good deal of hardened foeces, by which he was much relieved. After this, he continued pretty easy for the rest of the day. His pulse was not so feeble as it had been the day before, but it still intermitted.

Feb. 12. He was restless during the greatest part of the night, but towards morning had some sleep. He had not had any return of vomiting since six o'clock the preceding morning. His pulse was stronger, his look better than before; and from time to time he took some food. But, as he had no stool during the night, he was ordered electuary of cream of tartar.

Feb.

Feb. 13. He had several stools during the night; in the day-time he slept quietly; his pulse was fuller and stronger than it had been at any time since the operation; and he did not complain of thirst.

Feb. 14. He was restless in the beginning of the night, but slept a good deal in the forenoon, and had two stools during the day.

Feb. 15. The wound was dressed, had a good appearance, and was beginning to suppurate; but a new set of symptoms now supervened. On the preceding evening, a tumour appeared upon the side of his head, which seemed to be the parotid gland enlarged. He complained much of its being painful, particularly upon being touched. A poultice of bread and milk was applied to it. Through the night, however, he continued restless and uneasy, slept very little, was delirious when he awoke, was much affected with heat and thirst, complained of universal soreness, and his pulse was 96.

Feb. 16. He had a very bad night, and continued in every respect much the same as the day before.

Feb. 17. The wound was again dressed, and continued to look well. The tumour on his

cheek was eafier, and diminifhed in fize : But he had paffed a reftlefs night ; his pulse was feeble, and intermitted frequently ; and his ftrength much exhausted.

Feb. 19. His wound continued to fuppurate well. He had been reftlefs for the two preceding nights, but fleep a little in the day-time.

Feb. 20. He had not got paffage by ftool for three days paff. His belly was tenfe ; he was uneasy through the night, and fleep none. But the following night he had feveral ftools, by which he was much relieved ; and on the 22d he continued eafier ; but he ftill complained of fome pain along the courfe of the colon ; and his belly continued fuller and more tenfe than when in health. The wound was completely fuppurated, and looked well.

Mar. 1. For feveral days before, he had been free from all complaints ; he was gradually growing ftronger, and the wound beginning to contract ; by the 8th it was much contracted, and on the 18th was almoft healed. But I then found, that, for fome days, he had been gradually lofing ftrength. He was at times affected with heat and flushings ; much troubled with cough ; he expectorated,

torated, with great difficulty, a thick viscid phlegm, and his breathing was very laborious. By the 26th, however, all his complaints were better, and the wound perfectly heal.

About the beginning of May, he was so well as to be able to walk above three miles in a day, without any inconvenience. But, after that, he had a severe fit of the gout, from which, however, he is since recovered; and continues now, July 29th, in perfect health.

II.

Extract of a Letter from Dr Graham Physician in Stirling, to Dr Hope, Professor of Botany in the University of Edinburgh, concerning the external application of Deadly Nightshade.

FOR many years past, I have used the Belladonna externally with success, in hard ill-conditioned tumours and ulcers. I shall give you an instance of the good effects of this practice.

A middle aged woman became affected with an uncommon difficulty in discharging her foeces,

D d 2

which

which gradually encreased to such a degree, that at length she could have no stool, without the assistance of injections. By the help of these, however, she continued for a considerable time without asking advice about her complaint. But, by degrees, it became more and more difficult for her to introduce the clyster-pipe; and at length she found it almost impossible. In this unhappy situation she sent for me.

Upon introducing my finger by the anus, it was stopped by a hard tumour, seated in the anterior part of the rectum, immediately above the sphincter. I was likewise sensible of the same obstruction, upon introducing my finger by the vagina. This tumour, as far as I could judge, was about the size of a man's fist. She sometimes complained of violent pains darting suddenly through it. At other times it gave her no other uneasiness, than what might be supposed to proceed from obstructed foeces. She was always free from any degree of fever.

In this unfavourable case, I imagined that little could be done, unless by external applications; and that from these much could not be expected. I ordered a poultice made of the root of Belladonna, boiled in milk, to be applied to the a-

nus

anus and perineum, and to be renewed every morning and evening. Such was the effect of this application, that in forty eight hours after it was first employed, a clyster-pipe could be introduced with ease. She became daily sensible of the resistance diminishing ; and in the space of a month was restored to perfect health. There was in this case no suppuration, nor even the smallest discharge of any matter which might be supposed to come from the tumour, either by the anus or vagina. But the tumour gradually diminished in size, and, in a few days after the application of the nightshade, the surface of it could plainly be felt in a wrinkled state.

I could write you more examples of the good effects of this plant externally applied. Sometimes I have seen bad effects from its being taken internally ; but I never saw an instance of any one dying from it. I remember, indeed, to have heard of a soldier who died after eating the berries. But I have been assured by some people here, that, when they were boys at school, they have drunk the juice of the berries in no considerable quantities, without being hurt by it. This, I own, I have some difficulty in believing. Yet the plant grows in great abundance in the

neighbourhood of this town, and is well known to every body.

III.

Extract of a Letter from Mr Goodfir Surgeon at Largo, to Dr Duncan Physician in Edinburgh, concerning the Effects of the Flowers of Zinc.

I Have used the flowers of Zinc in several cases. In the two following ones it seems to have had a good effect.

About five or six years ago, a girl was seized with a hysteric fit, after walking barefooted among snow; and, ever since that time, she has, at intervals, been affected with fits of the same kind. But, for these three years past, they have gradually become more severe than before, and recurred more frequently. During the fits, she is sometimes affected with obstinate contractions in different parts of her body. At other times, she will be seized with such violent convulsions, as to throw her out of bed.

After trying with her a great variety of medicines, some of which gave a temporary relief, I had at length recourse to the zinc. The first dose she took was to the quantity of a grain, during

ring the time of the fit. She had no sooner swallowed it, than she was sensible, as she expresses it, of a sense of creeping, all over the surface of her body: And, soon after, the spasms, with which she was before affected, were entirely relaxed. She has continued the zinc ever since, which is now six weeks, and, during that space, she has been much freer from fits, than at any time for these five years past.

If she takes the zinc during a fit, it has now a very singular effect. Her complaints immediately leave the region of her stomach, and attack the inferior extremities. This she has repeatedly observed. I myself saw it this day. She complained much of pain in her breast, from which, upon taking a dose of the zinc, she was immediately relieved: But her legs became so stiff, that she was unable to walk.

The other case, in which I have employed the zinc with some success, is that of a young man afflicted with epilepsy. His fits are preceded by an aura epileptica, arising from the inside of the knee-joint. After trying several medicines, both internally, and topically to the knee, without any effect, I had at length recourse to the zinc. He has now used it for some time, and thinks himself much better.

S E C T. III.

Medical News.

MR John Hunter of London, in lectures which he read last winter, offered some curious observations on the exfoliation of bones, sloughing, and caustics. The following account of them, will, we apprehend, be highly acceptable to most of our readers.

Mr Hunter is of opinion, that the separation of the dead parts of animals from the living has not hitherto been properly explained. He observes, that one part of a bone is never thrown off from another, by the rotting of the dead part, since that which comes away is as sound, and as free from putrefaction as it ever was. It is impossible, that the hitherto supposed fungus between the sound and unsound parts of a bone, should

should ever take place in the manner that has been alledged. There is no room for such a fungus ; and granulations in cells are by no means adequate to the effect. Besides this, exfoliation takes place soonest in those bones in which there are the fewest cells, and where there is the closest cohesion.

Before any part of a bone can be thrown off by exfoliation, it must be dead. But even then, till the process of exfoliation begins, the bone adheres as strongly as ever, and would remain for years, before it could be separated by putrefaction alone. Bones are composed of two substances, a true animal matter, and an earthy matter, only intermixed with the other. Hard bones have a greater proportion of both these substances, in a given space ; but at the same time they have fewer vessels. A dead bone acts upon the system in the same manner as any other extraneous body. It stimulates the adjacent living parts ; in consequence of which such a process is begun as must terminate in its being thrown off.

The effects of this stimulus are, 1st, That the living adjacent bone becomes more vascular ; a circumstance which always takes place, when a part has more to do than is just sufficient for the support

support of life. *2dly*, That the earth of the living part, where it is in contact with the dead bone, is absorbed. Hence the bone becomes softer, as if it had been soaked in an acid, and adheres by its animal matter only. *3dly*, That the living animal part is at last absorbed along the surfaces of contact. This part of the process commences long before the last is finished. Both of them begin first at the surface, though, in their course, they do not every where take place in an equal degree at the same time. And, *4thly*, That, in proportion to the waste made by the last part of the process, a fungus arises from the living surface, and fills up the intermediate space; so that there may be no vacuum.

These different stages taken together constitute ulceration. When any part of a bone is once loose, it will be pushed to the surface in the same manner as most other inanimate bodies would be; and this stage is partly mechanical, partly a continuation of ulceration. A proof of the third stage mentioned above may be derived from those cases where people die while exfoliation is going on. A small groove, or worm-eaten canal, can then be discovered, which becomes gradually deeper, and follows the irregularities of the living
and

and dead surfaces. After the application of the trepan, a circular piece of bone is frequently thrown off, which is always less than the space from which it came. This, however, could never be the case, were there not a loss of substance.

The bones of grown people exfoliate sooner than those of young people. This probably happens from the nature of the bone itself; as all hard bones, and hard parts of bones, exfoliate sooner, when deprived of life, than those which are soft and spongy. Perhaps, hard bones become sooner dead, from their having fewer vessels.

Caustics, or actual cautery, do not in general hasten exfoliation. They produce death only in part of the bone, which is the first step towards exfoliation. If caustics ever hasten exfoliation where the bone is already dead, it must be by producing inflammation in the adjacent living bone. This brings about a change in it, and makes it exert a power which it was incapable of doing before.

Mr Hunter cannot say that he ever saw a cartilage exfoliate, although he has seen above fifty cases, in which cartilages were exposed, and has paid particular

particular attention to this subject. He has seen a cartilage scraped, and yet no sensible exfoliation ensued. He once saw a case where a cartilage became dead, turned black, and came wholly away from the end of the bone. But, upon examination, he found that part of the end of the bone had at the same time exfoliated, and fallen off with the cartilage; so that it was by no means the exfoliation of a cartilage from a cartilage.

He is of opinion, that, in sloughing, the process is nearly the same as in exfoliation. In this case, however, there is no earth to be absorbed. Thus, the constitution, in throwing off a soft part, has nothing to do with what corresponds to the second stage, in throwing off bone. By this means, the separation is completed in a much shorter time. Parts endowed naturally with most animal life slough sooner than those which have less. As for example, skin and muscles separate sooner than tendons and ligaments.

Mr Hunter is of opinion, that, in applying caustics, it is often of some consequence to be able to lessen the pain; especially when women and children are concerned. For obtaining this end, he recommends the application of the extract of opium to the part, for an hour before the caustic be employed,

ployed. He advises likewise, that the caustic be previously mixed with the extract of opium instead of soap. The idea of this practice occurred to him many years ago, when he was house-surgeon to St George's hospital.

Last winter, Dr Hunter met with a very singular case of a conception in the Fallopian tube. In consequence of its having burst, an internal hæmorrhage had ensued, which occasioned the death of the woman. He shewed the parts to his pupils. The uterus was enlarged nearly as much as it would have been, at the period at which the woman died, had the conception been in it; and the membrana decidua was distinctly seen lining the fundus uteri. He observed, that this case confirmed two opinions which he had before entertained, concerning the gravid uterus. It shewed, that the enlargement of the impregnated uterus does not happen mechanically from the encreasing bulk of its contents. It shewed likewise, that the decidua, or outer stratum of the secundines, belongs to the uterus, and not to the ovum, or that part of the conception which is brought from the ovarium.

During Dr Hunter's course of anatomy in the Spring 1773, Mr Cruickshank employed himself
pretty

pretty much in making injections of the kidney, liver, and lungs of the adult human subject. The following particulars were the result of these injections: *1st*, In one case, he pushed his injection from the artery to the pelvis and ureter, without any rupture of vessels. *2^{dly}*, In another, he injected the pelvis and ureter from the vein, which he thought succeeded better than from the artery. *3^{dly}*, In three different kidneys, he injected from the ureters the tubuli uriniferi, for a considerable length along the mamillae; and, in one case, a number of the veins on the external surface of the kidney were evidently filled with the injection. In all these experiments, the colouring matter of the injection was vermilion. *4^{thly}*, In most of his injections of the arteries of the kidney, he found what anatomists have called cryptae, and have described as cells, to be exceedingly fine convolutions of very small arteries. *5^{thly}*, He has often filled the lymphatics of the lungs and liver with quicksilver; and from the lymphatics of the liver he has been able, twice in the adult, and once in the foetus, to fill the thoracic duct itself.

The high expectations which the public have long entertained of Dr Hunter's anatomical
plates

plates of the gravid uterus, will probably be soon satisfied. The text for these plates is now in the press; and it is thought that they will for certain be published during the course of the ensuing winter.

An accurate survey has this summer been made of the number of inhabitants in the town of Manchester. By it an exact account has been obtained of the number of houses, families, males, females, married, widowers, widows, under fifteen, above fifty, male lodgers, female lodgers, and houses which are in that town. The expence of this survey was defrayed by a subscription set on foot by that industrious physician and philosopher Dr Percival, who has transmitted a particular account of it to the Royal Society. As an accurate enumeration of the inhabitants of any town is the only foundation upon which useful bills of mortality can be established, it is unquestionably a subject which well merits the attention of physicians in general.

Dr Colin Drummond, who was chosen president of the Royal College of Physicians in Edinburgh, at their annual election in December last, having gone to reside in Bristol, sent a demission of his office. Upon this the college, at their
quarterly

quarterly meeting on the third of August, unanimously made choice of Dr William Cullen to be their president, till next annual election. At the above meeting, Dr Nathan Spens was admitted a licentiate of the college.

Dr Robert Hamilton physician at Lynn Regis in Norfolk, has sent to the philosophical society at Edinburgh, an accurate history of the Mumps, a disease which for many years has been very prevalent in the town where he resides, and its neighbourhood. He points out particularly the necessity of attending in practice, to that remarkable alternation which takes place between the swelling of the face and testicles. And he mentions more than one instance, in which, after the testicle had been greatly swelled, upon the disease going off, it was entirely wasted away, in so much, that the tunica vaginalis became an empty bag.

In a late dissection of a pregnant woman, at Dublin, a double uterus has been found. The vagina was divided by a septum, and the two passages thus formed communicated each with a separate uterus. These two uteri lay on different sides, one ovarium and one Fallopian tube belonging to each. The one uterus was in an im-

pregnated

pregnated, the other, in an unimpregnated state. A full account of this uncommon appearance, with an accurate drawing of it, which was taken at the time of the dissection, will probably be soon communicated to the world, in some of the public transactions.

The great success which has attended the benevolent endeavours of the society, instituted some years ago at Amsterdam, for the recovery of drowned persons, has induced several other states in Europe to follow their example. Institutions of a similar nature have accordingly been set on foot at Hamburgh, Venice, Milan, Padua, Vienna, and Paris. Dr Alexander Johnson, in the account which he has lately published of these foreign societies, has endeavoured to point out the utility and advantage which would accrue to Great Britain from a similar institution, and to rouse the attention of his country-men to this subject. The particulars pointed out, as chiefly claiming the attention of such institutions, are to inform the common people of the measures which may be most effectually employed for the recovery of drowned persons; to caution them against practices which have hitherto been frequently employed, but which experience has now

shewn to be pernicious; to instigate them, by proper rewards, to the exertion of every endeavour for the recovery of life apparently lost; and to defray any expences that may be incurred in such humane attempts. Dr Johnson promises, provided his design meets with proper encouragement, to publish instructions for the proper treatment, in the various accidents in which he apprehends relief may be administered.

S E C T.

S E C T. IV.

A List of new Books.



THE philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious, in many considerable parts of the world, vol. 62. for the year 1772, 4to, London.

An abridgement of Baron Van Swieten's commentaries, upon the aphorisms of the celebrated Dr Herman Boerhaave, late professor of physic, &c. in the university of Leyden, concerning the knowledge and cure of diseases. By Colin Hofsack, M. D. of Colchester, physician to his late Royal Highness Frederick Prince of Wales, vols. 1. & 2.

Traité de la goutte, et de toutes les maladies chroniques, avec une méthode naturelle et raison-

née propre a les guérir. Ouvrage traduite de l'Anglois de Guillaume Cadogan, membre de la Faculté de médecine de Londres, 8vo, Paris.

Statuts et réglemens généraux, pour les maîtres en chirurgie des provinces du royaume; donnés a Marly le 24 Février 1730, 5me edition, augmentée des edits, arrêts, et déclarations, qui y ont rapport des différentes notes et éclaircissmens, des modeles pour les lettres de maitrise, &c. Dedié à M. de la Martiniere conseiller d'état, premier chirurgien du Roi, &c. Par M. le Bloud d'Oblen, avocat en parlement, secretaire de M. le premier chirurgien du Roi, 8vo, Paris.

Elemens de pharmacie theorique et pratique, par M. Baumé; troisiéme edition, corrigée et augmentée, 8vo, Paris.

LaPhysique des Dames, ou les quatre elemens; ouvrage utile pour disposer à l'intelligence des merveilles de la nature, par M. de Rofnay, 12mo, Paris.

Histoire de l'Académie royale des sciences, année 1770, avec les mémoires de mathématique et de physique pour la même année, tirés des registres de cette academie, 4to, Paris.

Histoire universelle du regne végétal, ou Nouveau dictionnaire physique et économique, de toutes les

les plantes qui croissent sur la surface du globe, contenant leurs noms botaniques, et triviaux dans toutes les langues, leurs classes, leurs familles, leurs genres, et leurs especes ; les animaux auxquelles elles peuvent servir de nourriture ; leur analyses chymiques ; la maniere de les employer pour nos alimens tant solides que liquides ; leur propriétés, non seulement pour le médecine des hommes, mais encore pour celle des animaux ; les doses, et la maniere de le formuler, et les differens usages pour lesquels on peut s'en servir dans les arts et metiers, &c. Auquel on a joint une bibliotheque raisonné de tous les livres de botanique, l'explication des differens termes usités dans cette partie de l'histoire naturelle ; une notice de tous les systêmes ; et enfin le liste des professeurs, et des jardins botaniques de l'Europe. 24 vol. in fol. ornés de 1200 planches gravées en taille douce, par les meilleurs maitres, et dessinées d'après nature sur les plantes les plus rares du jardin du Roi, et de celui de Trianon, et d'apres la magnifique collection des plantes déposée dans le cabinet des estampes à la bibliotheque du Roi, commencée et executée par ordre et sous les yeux de feu M. le Duc d'Orleans regent du royaume, par Robert, Au-

driet, &c. et continuée dès nos jours, par M. Basseporte, 12 vols, folio. Paris.

F. A. von Wasserberg von den nutzein und der weise, die luft rein zu halten. i. e. F. A. von Wasserberg on the advantages of pure air, and on the means of obtaining it. Vienna.

Anfangs-grund der metallurgie, &c. i. e. Elements of mineralogy, translated from the Latin of Wallerius, 8vo. Leipfic.

Hortus Romanus, juxta systema Tournefortianum, paulo strictius distributus a Georg. Bonelli Moregal. med. Prof. specierum nomina suppeditante L. Sabbati Mera. hort. custod. tom. 1. Romae.

Zwey Canzelreden, &c. i. e. Two discourses on the legality of inoculation, pronounced on the 21st of November 1769 and 1770. Mittau.

Dominici Vandelli. hist. nat. Prof. Reg. &c. Fasciculus plantarum prior. Lisbon.

A treatise on the Kinkcough, with an appendix, containing an account of hemlock and its preparations, by William Butter, M. D. Fellow of the Royal College of Physicians, Edinburgh. 8vo, London.

A course of physiology, divided into twenty lectures, formerly given by the late learned

Dr

Dr Henry Pemberton professor of phyfic at Gresham college, Fellow of the Royal Society, and of that at Berlin, now first published from the author's manuscript, 8vo. London.

Memoirs of the society instituted at Amsterdam in favour of drowned persons ; for the years 1767, 1768, 1769, 1770, 1771, translated from the original, by Thomas Cogan, M. D. 8vo, London.

Dictionnaire des eaux et fontaines minérales, contenant l'histoire naturelle de toutes les fontaines minérales de la France, leur description historique, leur situation, l'analyse chymique des eaux et leurs propriétés pour les différentes maladies ; avec des observations pratiques sur l'usage qu'on doit en faire, les diverses methodes de s'en servir, et le régime qu'il faut observer pendant leur usage. On y a joint les différentes manieres d'analyser les eaux minerales et d'en preparer d'artificielles, et une notice exacte de tous les ouvrages qui ont paru sur cette matiere. 2 tomes, 8vo, Paris.

Cours complet d'anatomie en quinze planches, peintés et gravés en couleurs naturelles ; par M. Gautier Dagoty second fil, et expliquées par M. Jadelot professeur d'anatomie, de la faculté de

medecine de Nanci, et de l'Académie des sciences et belles lettres de cette ville, folio. Paris.

Observationes phaenomenorum electricorum in Hohen-Gebrachin et Prissling, prope Ratisbonam, factae et expositae a Caelest. Steiglehner. O. S. B. &c. Regensbourg.

Curationum chirurgicarum, quae ad fistulam lachrymalem huc usque fuere adhibitae, historia critica. Auctore J. D. Metzger. M. D. Comitibus Bentem-Steinfort Archiater, &c. Munster.

Analyse des eaux thermales d'Aiz en Savoie; dans laquelle on expose les diverses manieres d'user de ces eaux, la methode et le régime de vivre, qu'il convient de suivre pendant leur usage, et les différentes maladies pour lesquelles elles sont employées; avec plusieurs observations qui y sont relatives, pour en constituer les propriétés. Par M. J. Daquin. M. D. de la faculté de Turin, medecin de l'Hotel-dieu de Chambery, et secretaire de la société d'agriculteur de la même ville. Chambery.

Bechers neue abhandlung von Carlsbad wasser. i. e. A new treatise on the Carlsbad waters, by David Becher, M. D. Prague.

Unterricht gegen die Kinder-Blattern, i. e. Directions with regard to the small-pox. Dantzick.

A history of a gentleman cured of heats in his face, written by himself, 8vo. London.

Some

Some additional observations on the method of preserving seeds from foreign parts, for the benefit of our American colonies; with an account of the garden at St Vincent's under the care of Dr George Young. By John Ellis, F. R. S. 4to. London.

Advice to both sexes in the venereal disease, and a method by which they may probably escape the infection in their intercourses with each other, when one of the parties is foul, 12mo. London.

Directions for the management of children, from the time of their birth to the age of seven years; and a plain and full account of every disorder to which they are subject, as well as of those peculiar to the female sex; with varieties of efficacious and easy remedies for each disease, selected from the best authors. By M. A. Clarke, M. D. and Professor of midwifery, 8vo. London.

Examen chymique des pommes de terre, dans lequel on traite des parties constituentes de bled. Par M. Parmentier, apothecaire-major de l'hotel royal des invalides, 12mo. Paris.

Chymie experimentale et raisonnée, par M. Baumé Maître Apothicaire de Paris, Démonstrateur en Chymie, et de l'Académie royale des Sciences, 3 vols, 8vo. Paris.

Dictionnaire raisonnée universel de matiere médicale, concernant les vegetaux, les animaux,
et

et les minéraux, qui sont d'usage en medecine; leurs descriptions, leur analyse, leurs vertus, leurs propriétés, &c. recueillies de manuscrits originaux et des meilleurs auteurs, anciens et modernes, tant étrangers que de notre pays; avec une table raisonnée de tous les noms que chaque pays a données aux mêmes végétaux, animaux, et minéraux, 4 vols, 8vo. Paris.

Tableau des maladies veneriennes, suivi de l'exposition des principales méthodes employées jusqu'ici pour les combattre. Ouvrage fondé sur l'experience, et redigé d'apres les principes des plus grands medecins, tant anciens que modernes. Par M. C. E. Thion de la Chaume. Med. de la fac. de Paris, 8vo. Paris.

Recherches sur les fievres, selon qu'elles dependent des variations des saisons, et tels qu'on les a observées à Londres ces vingt dernieres années, avec des observations pratiques sur la meilleur maniere de les guerir. Par M. Guillaume Grant. M. D. Traduit de l'Anglois par M. de la Febure, 2 vols, 12mo. Paris.

Histoire naturelle du Thé, avec les observations sur les qualities medicales, et les effets qui resultent de son usage; par Jean Coakley Lettsome, M. D. Traduit de l'Anglois, 12mo. Paris.

Avis

Avis aux gens de la campagne, ou traité des
les maladies les plus communes. Ouvrage tres
utile aux pasteurs, chirurgiens, et gens de la
campagne. Par M. Didelot, 12mo. Paris.

Demonstrations élémentaires de botanique a
l'usage de l'école veterinaire, nouvelle edition, 2
vols. 8vo. A Lyons.

Erxlobens betrachtungen, i. e. Reflections on
natural history, by J. Ch. Erxloben. Gottingen.

Ern. Jerem. Neifeld, M. D. Ratio medendi
morbis circuli sanguinei, monumentis praeestan-
tissimorum medicorum, tum veterum, tum vel
maxime recentiorum, superstructa. Breslaw.

Caroli Strack, M. D. et in univers. Mogunt.
med. prof. &c. Observationes medicinales de co-
lica pictonum, maximeque ob arthritidem, 12mo.
Francfort.

Traitement de la petite verole des enfans, à
l'usage des habitans de la campagne, et du peuple
dans les provinces meridionales; auquel on a
joint la methode actuelle d'inoculer la petite ve-
role. Par M. Henry Fouquet, M. D. 2 vols.
12mo. Amsterdam.

J. F. Zuckert, M. D. Von den wahr mitteln
die enthlofung epidemischen krankheiten zu ver-
huten,

huten, i. e. An essay on the means of preventing depopulation from epidemic diseases, by J. F. Zuckert, M. D. Berlin.

Differtationes medicae, quas ex auctoritate reverendi admodum viri Gulielmi Robertson SS. T. P. academiae Edinburgenae praefecti; nec non amplissimi senatus academici consensu, et nobilissimae facultatis medicae decreto; pro gradu doctoratus, summisque in medicina honoribus et privilegiis rite et legitime consequendis; eruditorum examini subjecerunt,

Robertus-Butler Remmet, Britannus, De opii usu in morbis inflammatoriis.

Georgius Pearson, Britannus, De putredine animalibus post mortem superveniente.

Carolus Newman, Hibernus, De dyspepsia.

Joannes Ligertwood, Britannus, De angina inflammatoria.

Jacobus Johnstone, Britannus, De angina maligna.

Gulielmus Wemyss, Britannus, De ophthalmia.

Boyleus Coghlan, Hibernus, De plethora.

Gulielmus Boyd, Hibernus, De diabete.

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E R R O R S

We are sorry to learn, by a letter from Mr Hewson of London, that his opinion concerning the use of the spleen is not properly represented in our Commentaries, pag. 99. et seq. But it is with pleasure we can inform our readers, that he hopes soon to publish an account of it himself.

Pag. 151. l. 5. *For metallic substances, read metallic solutions*

THE END OF THE FIRST VOLUME.

